PRINTING PRODUCTION

THE PRODUCTION MAGAZINE FOR PRINTERS AND LITHOGRAPHERS

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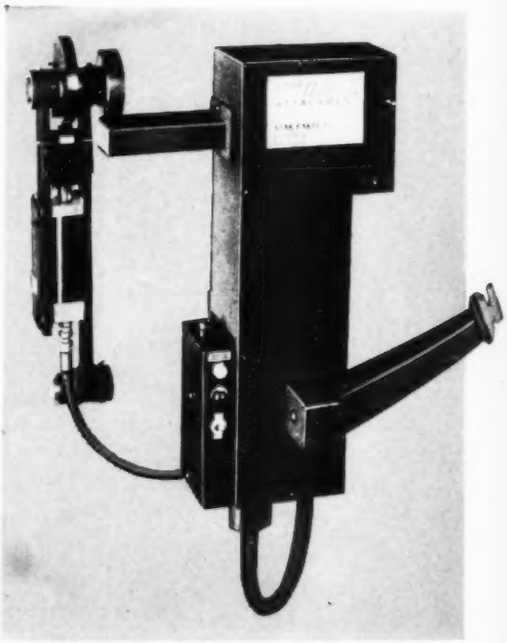
The versatile Selectro-Matic Quadder is designed for automatic operation from tape signals or manually by a convenient push-button selector. It allows the operator to change signals faster. "Widow" lines are automatically flushed left, either in tape or manual operation.

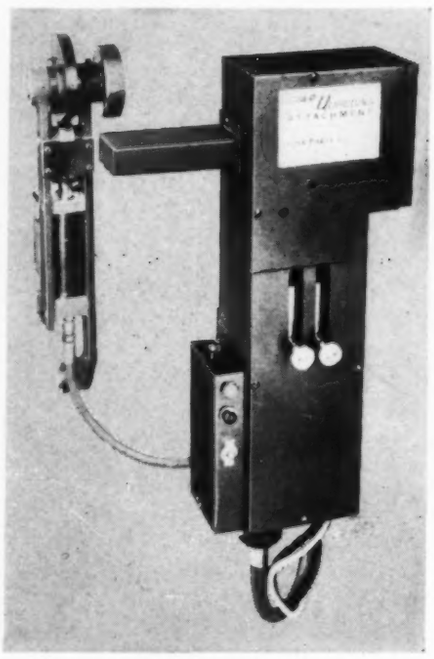
MECHANICAL Quadder

The Star Mechanical Quadder is controlled through a dial selector within easy reach of the operator. All operations are mechanical with the exception of the Electro-Pump Stop Safety.



ECONOMY Quadder

The Economy Quadder is basic in both equipment and price. Push-pull knobs on the quadder housing change quadder functions. Many de luxe features are found in the Economy model, which can later be built up to full Selectro-Matic flexibility if required.



All Star Quadders are hydraulically actuated, and standard equipment includes the No-Set Delivery Slide, the Electro-Pump Stop Safety, the Dial Type Point-setting Measure Control, Vise Jaws and Blocks, and a Friction Rail Assembling Elevator Gate. Any Star Quadder can be installed in only 8 hours. Write for full details.

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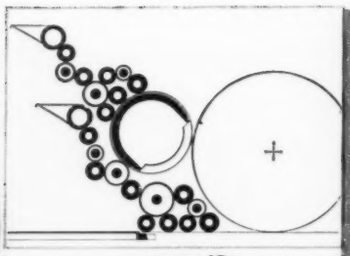
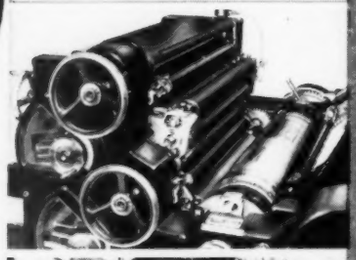
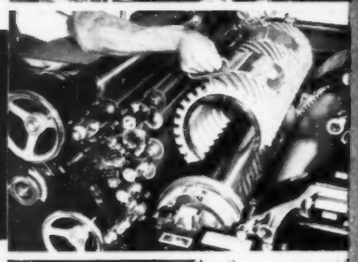


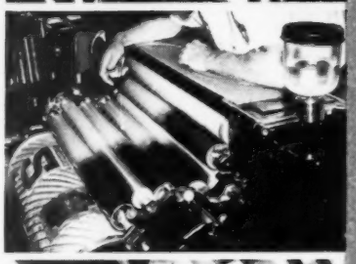
Heidelberg inking system obsolete all others. Diagram shows round and flat form inking systems on Heidelberg's 21 x 28 Two-Color Press.



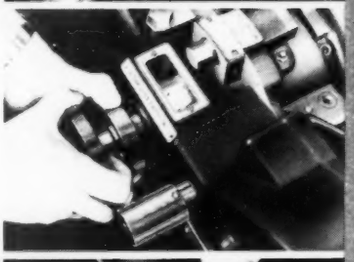
Roller pyramid for curved plate form is easily and quickly backed off curved plate cylinder. Greatly facilitates make-ready and press settings.



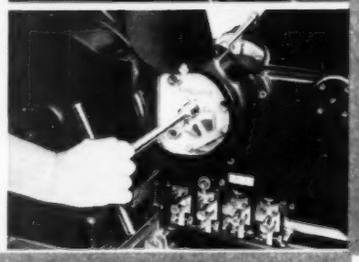
Rotary shell can be removed and mounted in less than 60 seconds. Positioning and registering can be done away from the press.



Heidelberg's famous built-in washup saves tremendous time in washing both ink systems.



Curved plate cylinder can be adjusted laterally, permitting quick positioning of curved plate form to flatbed form.



Circumferential direction of curved plate cylinder is also adjustable. One of many features designed to reduce down time.

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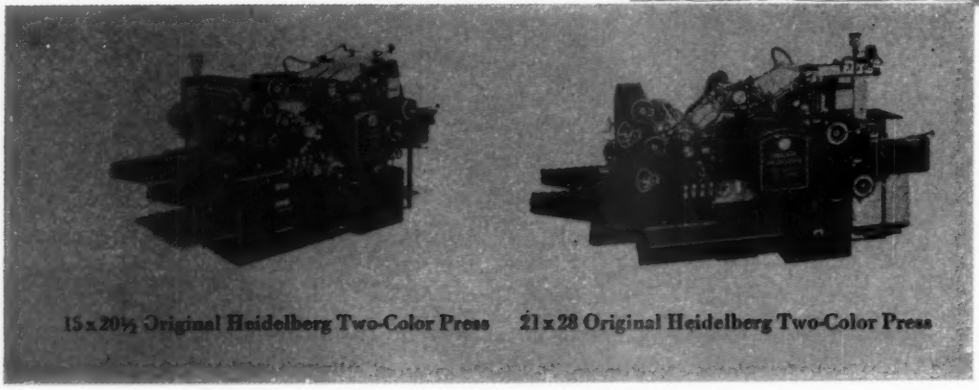

15 x 20½ Original Heidelberg Two-Color Press 21 x 28 Original Heidelberg Two-Color Press

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NOVEMBER 1959
VOL. 90, NO. 2

PRINTING PRODUCTION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

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PRINTING PRODUCTION is published monthly at 1276 West Third St., Cleveland 13, Ohio. © 1959 by Willsea Publishing Company.

Subscription rates in United States: One year, $5.00; two years, $8.00; three years, $10.00. Canada and U. S. Possessions: One year, $5.50; two years, $8.50; three years, $11.00. All other countries: One year, $10.00; two years, $16.00; three years, $20.00, in advance. Single current issues, 50c; back issues, 75c. December *Where To Buy* Printing Equipment and Supplies Reference Issue, $2.50 in United States; $3.50 outside United States. All foreign subscriptions payable in U. S. funds.

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Accepted as Controlled Circulation Publication at Cleveland, Ohio.

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THE COVER design indicates the increasing concern in the Graphic Arts industry for knowing actual operating costs of a productive plant. Here are two litho plant executives figuring their own production costs based upon the informative article *Determine Your Own Litho Plant Costs* which may be found on page 31. By comparing existing cost systems with those outlined in this feature, a new and more accurate perspective on costs may be gained. According to the author, a litho plant cost authority, application of information of this type can result in substantial savings and increased profits for a company.

LETTERS

TO THE EDITORS

A Basic Point on Research Brings Some Objections

I applaud Marvin Rogers' article *Status of Graphic Arts Research* in the September issue. This is not surprising because, for the time being, he is in my corner. I'll not be too self-satisfied and complacent, however, because I suspect that in a later installment Dr. Rogers will scan the research institutes with his critical eye.

Although I am in general agreement with Dr. Rogers, I do disagree with one basic point. He discusses the industry research organizations and says, "There is activity in the right places." Perhaps any activity is better than none, but I have three criticisms for industry segmented research institutes.

My first objection is that the association research laboratories are small and isolated. As small, inadequately financed groups, their efforts are comparatively ineffective. If all industry laboratories were grouped together into one large organization, then the research activities would supplement each other. We seem to feel that each facet of printing has its own specialized problems unrelated to the rest of the printing industry. This is not so.

In fact, and this is my second point, most association research efforts were organized to perpetuate the supporting segment. They were defensive rather than offensive measures. But the whole printing process is a continuous operation, and by securing the position of one of the steps, we may hamstring progress in all others.

The third point is the "let George do it" attitude mentioned as my pet peeve by Dr. Rogers. In this case it is the feeling, "I pay the association. Let them find out what my ills are, and let them find the cure." Again, they would like to introduce perfected improved methods without inconvenience or loss.

Because of these arguments, I do not agree with Dr. Rogers that this is activity in the right places. The right place, in my opinion, is right in the printing plants themselves. What the industry needs desperately is an engineering or technological staff function in their organization which has the support of management. The right place, too, is a large industry-wide research organization which can benefit from cross-communication and which can take the broad view of the printing operation instead of a narrower one such as the stereotyping operation.

Warren L. Rhodes, Head
Graphic Arts Research Dept.
Rochester Institute of Technology
Rochester, New York

Congratulations to you for publishing and to Dr. Marvin C. Rogers for writing a very excellent article on the *Status of Graphic Arts Research*.

Wm. H. Webber, Executive Director
Lithographic Technical Foundation
New York, N. Y.

Correct Press Specification

In your September issue story on new M-G-D equipment you mention an incorrect specification for the new Miehle four-color offset press. This is the 25½ in. by 38 in. press, not a 25½ in. by 30 in. model.

L. S. Alexander
Miehle-Goss-Dexter, Inc.
Chicago, Ill.

More Who's Who Comments

Who's Who in Graphic Arts in America was a well-planned, effective issue. You certainly deserve the compliments of the industry.

George E. Cameron, Plant Supt.
Chilton Company, Printing Div.
Philadelphia

We are quite pleased with the contents of the Reynolds & Reynolds listing in Who's Who in Graphic Arts in America, and feel you have done a fine job on the entire publication.

Frank F. Pfeiffer, President
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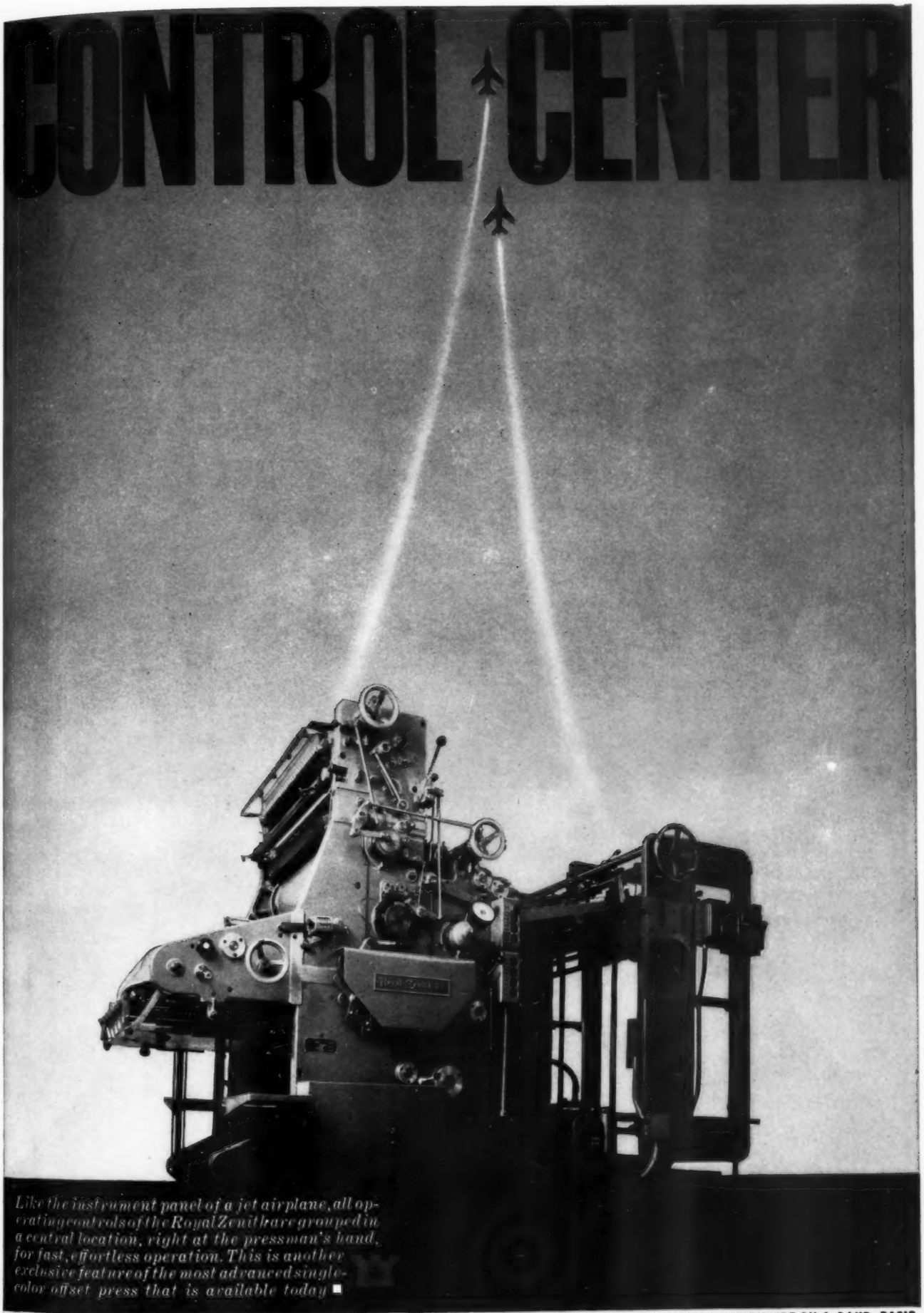

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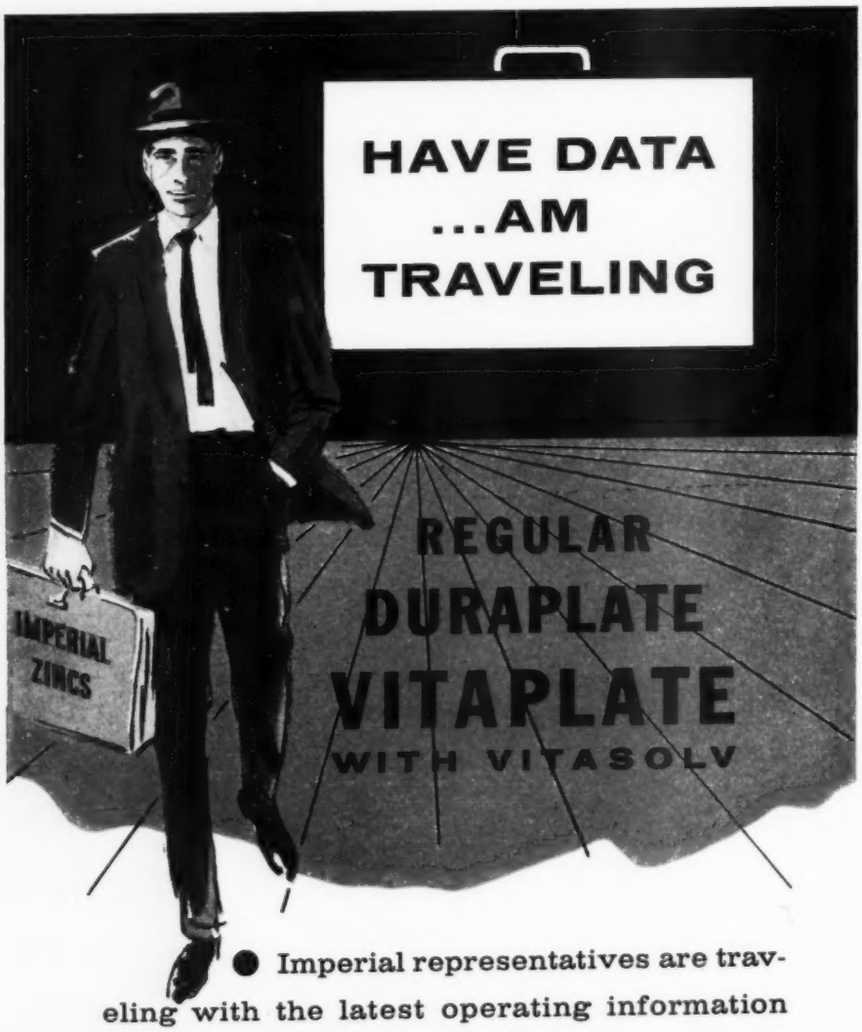
NEWS ITEMS

Lanston Reactivates Canadian Subsidiary—Lanston Industries, Inc., has reactivated its Canadian subsidiary, the Monotype Company of Canada, Ltd., according to Kurtz M. Hanson, president of Lanston. The move ends a three year period in which Manton Brothers Ltd. of Canada was franchised to handle the Lanston line. The new firm is located at 263 Adelaide St., Toronto, and consists of a sales office, display room, maintenance center and parts depot.

Sun Opens Venezuela Ink Plant—A printing ink plant has been established in Caracas, Venezuela, by Sun Chemical Corp., according to John S. Thome vice president in charge of Sun's Graphic Arts group. The plant will be operated under the name of Sun Chemical—Fuchs & Lang de Venezuela. Bernard Kaufman has been appointed general manager. The plant will be under the general supervision of L. M. Flores, general manager, Fuchs & Lang de Mexico.

Cullom & Ghertner Promotes—S. Cecil Appleby has been appointed general sales manager for Cullom & Ghertner Co., Nashville, Tenn., according to Alven S. Ghertner, president. He will be responsible for over-all coordination of sales, according to the announcement.



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WALSH

PECKMAN

New M-G-D Positions—A. E. Peckman and F. I. Walsh, jr. have been appointed to positions recently created by divisions of Miehle-Goss-Dexter, Inc. Walsh has been named vice president and general manager of Dexter Company. His headquarters will be at the Dexter plant, Pearl River, N. Y. Peckman has been named national sales manager of the two bindery divisions, Dexter and Lawson Companies. Peckman is also a vice president of Dexter.

McGill Appoints Manager—Robert C. Honel has been promoted to manager of the estimating and planning department, McGill Company Graphic Arts Center, St. Paul according to R. J. Krueger, executive vice president. In his new post, Honel will coordinate sales and production by setting up methods for facilitating working procedures between the two departments. He is a vice president of the Minneapolis Craftsman's Club.

Mid-States Sales Program—A sales expansion program has been completed by Mid-States Gummed Paper, Div. of Minnesota Mining and Mfg. Co., according to A. A. Blaess, sales manager. In line with this, Donald A. Akers will represent Mid-States in the new South San Francisco office; John A. Reichle, in the St. Paul-Minneapolis area; R. C. MacFarland, in New York; and A. O. Kruger, in Chicago.

Changes in Philadelphia Company—A change in ownership and name for Shaw's Incorporated, Philadelphia business form printers, has been announced by Thomas M. Shaw, retiring owner, Doylestown, Pa. The new owners are Fred E. Rudman and M. W. Rihn, both formerly associated with the Todd Company, Philadelphia. They will operate the business under the name of Shaw Systems, Inc., 2300 W. Allegheny Ave.

Pitman Sales Representative—Harold M. Pitman Co. has announced the appointment of David M. Smith as a sales representative in the Chicago office. Smith has served on the staff of the Lithographic Technical Foundation in the program devoted to the study of photosensitive materials.

LeGrand L. Clark dies—LeGrand L. Clark, 90 president for 40 years of T.W. & C.B. Sheridan Co., New York City, died Oct. 7 at his home in Plandome, L. I Widely known in the printing and binding industry, he sponsored the development of many automatic machines

(Continued on Page 12)

HAMMERMILL OFFSET FORGES A STRONG LINK IN YOUR SELLING CHAIN

If you want printing with real sell, your artwork, typography and plates must be sharp and clear. The links that tie these together are the printer's skill and the paper he uses. Many skillful printers like Hammermill Offset's smooth, level surface, its correct moisture content, superior opacity, and strength. They know it is great for full color work. For black and white, too.

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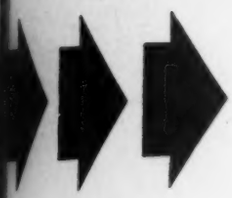

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PRINTING PRODUCTION

1276 West 3rd Street

CLEVELAND 13, OHIO

READER SERVICE DEPARTMENT

EXTRA!

NEW

HIGH

FLAME

RESISTANT

NEWSPRESS

ROLLER

THE BINGHAM

FIVE STAR ROLLER

This is the Bingham FIVE STAR (FINAL) ★★★★★, the latest and best, effectively flame-resistant newspress roller . . . another "first" added to the famous Bingham line of flame-resistant newspress rollers, which daily —on more presses than any other kind—are getting the nation's papers on the street and in the mail while news is still news. Another speed factor is the faster Bingham regrinding service provided by Bingham's nationwide network of factories.

From your nearest Bingham factory, your most exacting requirements can be supplied in a minimum of shipping time. This will keep your rollers *on your presses* earning profits—not in a freight car or truck.

For safety sake, standardize on Bingham Five Star flame-resistant rollers. Whether you need new rollers or faster regrinding service—do as most metropolitan dailies do—so contact your nearest Bingham plant.

NATURAL RUBBER OR FLAME-RESISTANT ROLLERS—RUBBER REGRINDING SERVICE

SAM'L BINGHAM'S SON MFG. CO.
MANUFACTURERS OF
PRINTERS' ROLLERS

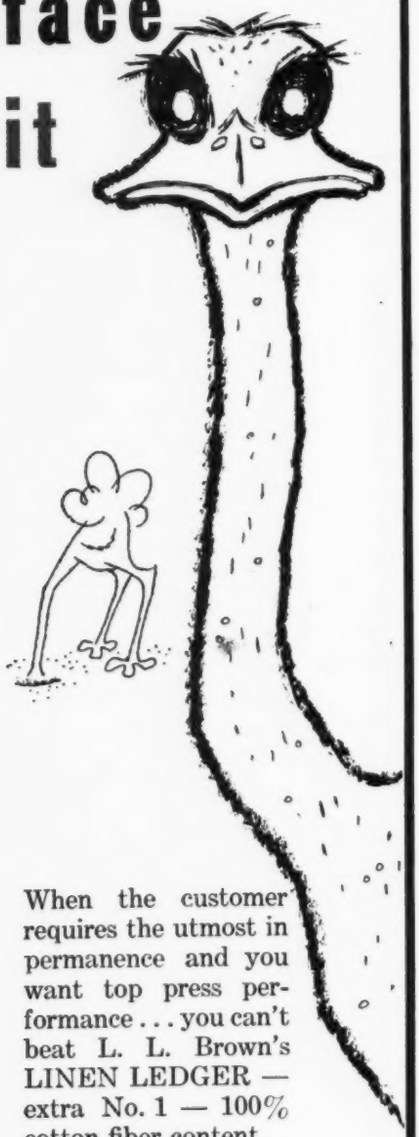
SERVING THE PUBLISHING INDUSTRY FOR OVER 100 YEARS

Bingham Rollers are on more presses than any other kind

Chicago • Atlanta • Cincinnati • Cleveland • Dallas • Des Moines • Detroit • Houston • Indianapolis • Kalamazoo • Kansas City • Milwaukee • Minneapolis • Nashville
Pittsburgh • St. Louis • Searcy, Ark. • Springfield, O.

For More Information Circle 21 on Reader Service Card

let's face it



When the customer requires the utmost in permanence and you want top press performance . . . you can't beat L. L. Brown's LINEN LEDGER — extra No. 1 — 100% cotton fiber content.

"The quality which has earned its reputation"

BETTER COTTON FIBER PAPERS

L. L. BROWN
PAPER COMPANY
ADAMS, MASSACHUSETTS

Circle 24 on Reader Service Card

News Items

(Continued from Page 8)

for use in the Graphic Arts field and was one of the original directors of the National Printing Equipment Assoc.

Ad Production Manager—R. Wallace Ebe, jr., has been named manager of mechanical production in the Washington, D. C., office of Ketchum, MacLeod & Grove, Inc., advertising and public relations agency.

Modern Plant for Boyd Company—The H. S. Boyd Co. has opened a new plant located at 6915 E. 14th St., Tulsa, Okla. Completely air-conditioned, the building contains 4500 sq. ft. of working space and carport parking facilities for employees. Boyd manufactures scoring and perforating equipment.

Yahnke Company Appoints—Frederick J. Lund has been named development director of the J. G. Yahnke Company, Libertyville, Ill., it was announced by Grace Yahnke, president. Lund will direct new product development and customer service. The company manufactures anti-offset spray equipment and other materials for the printing industry.

Otto J. Wagner Dies—Otto J. Wagner, president, Nessler and Wagner Co., Cincinnati, died Sept. 8 at the age of 70. Wagner formed a partnership with Jacob G. Nessler after World War I to establish Nessler and Wagner Co., which specializes in the installation and servicing of all types of Graphic Arts equipment.

M-G-D Personnel Changes—The following personnel appointments have been announced by divisions of Miehle-Goss-Dexter, Inc.: Frank Janik has been named product service manager of the Miehle Company. He is responsible for Miehle service activities throughout the country and will make his office in Chicago. Sam H. Fitzpatrick has been appointed sales representative for M-G-D in San Francisco; Charles H. Beachler, sales representative for Dexter Company in San Francisco; Ted Weiberg, sales representative for Dexter and Lawson Companies in Chicago; and John DeFoe, M-G-D sales representative in the Southeastern territory, which encompasses Tennessee, Alabama, Mississippi, and portions of Louisiana.

Milwaukee Journal Promotes Two—Robert H. Dumke has been appointed production manager and George A. Henninger, assistant production manager of the Milwaukee *Journal*, according to C. R. Conlee, vice president and promotion

DUMKE

HENNINGER

manager. Dumke, who succeeds the late Joseph E. McMullen, has been production research coordinator since 1952. He also has served as head of the photography department. Henninger has held the positions of composing room foreman, assistant mechanical superintedent, and mechanical superindentent.

Oxy-Dry Paris Branch—A branch office to service European countries has been established by Oxy-Dry Sprayer Corp. in Paris, according to Gordon W. Wilson, vice president of the company. Conrad van Zantwyk has been appointed European representative to head the office. He is a member of the research committee of Lithographic Technical Foundation and the Technical Assoc. of the Graphic Arts.

VAN ZANTWYK

HOMMEL

Unitronics Vice President — Theodore Hommel has joined Lanston Industries, Inc., as vice president of the Unitronics division, it has been announced by Kurtz M. Hanson, president of Lanston. Hommel comes to Lanston from Universal Match Corp., which recently sold Unitronics to Lanston. A co-founder of Unitronics in 1949, Hommel has been in charge of that organization since 1956.

WEIBERG

JANIK

DEFOE

FITZPATRICK

BEACHLER

For More Information Circle 96 on Reader Service Card→

LOOK TO THIS LABEL FOR

WITH

Now you can offer top-quality letterpress color printing with a minimum ink inventory! Speed King's 18 popular colors and black are all you need for nine out of ten jobs, yet they intermix perfectly when the customer demands a special color. Your nearest IPI branch has Speed King in handy 1 and 5 lb. cans . . . ready to do your presses proud!

IPI, IC and Speed King are trademarks of Interchemical Corporation

CORPORATION DIVISION

EXECUTIVE OFFICES: 67 WEST 44th STREET, NEW YORK 36, N. Y.

GRIFFY

SEEL

Macey Appoints Two– W. H. Griffy and Lew Sheldon have been appointed to new positions by Macey Company, according to C. F. Shaffer, general sales manager. The Macey Co. is a subsidiary of Harris-Intertype Corp. Griffy has been appointed Pacific district manager; his office will be at 1830 W. Pico Blvd., Los Angeles. In this position, Griffy will coordinate sales and service operations in California, Oregon, Washington and Nevada. Sheldon has been appointed Central district manager, the position formerly held by Griffy. The Central district comprises a seven state area. Formerly, Sheldon was New York district sales manager.

Harris-Seybold Chief Engineer—Howard J. Seel has been promoted to chief engineer of Harris-Seybold Co., Div. Harris Intertype Corp. Formerly chief engineer of the Cleveland plant, Seel will retain that post while also assuming responsibility for engineering in the division's other plant in Dayton.

IPI Appointment—John Hargrave, Eastern district manager of Interchemical Corporation, Printing Ink Div., has announced the appointment of Murray Beckford as manager of the Hamden, Conn., branch.

D-I Offset General Manager—Appointment of Andrew G. Murray as general manager of Direct-Image Offset Corp., affiliate of Standard Rate & Data Service, Inc., has been announced by C. Laury Botthof, president. Murray was formerly with American Type Founders and Miller Printing Machinery Co.

Cutler-Hammer Appoints—E. C. Bolton has been appointed midwestern regional sales manager of Cutler-Hammer, Inc. His headquarters are in Chicago. Replacing Bolton in Cincinnati, where he had managed the district sales office, is J. H. Sauer, former manager of the Indianapolis district. R. A. Pancoast, Philadelphia sales staff, has been named to the Indianapolis post.

Mergenthaler Ad Manager— Arthur L. Koop, jr., has been named advertising manager by Mergenthaler Linotype Co., Paul S. Chisholm, vice president for sales, has announced. In his new post, Koop will report to Edmund C. Arnold, director of trade relations.

KOOP

SHIRLEY

Chemco Boston Representative — John Shirley has been appointed sales representative in the Boston and northern New England areas by Chemco Photoproducts Co., Inc. His headquarters will be at 255-A Huntington Ave., Boston.

Link-Belt Executive Dies—Alfred Kauffmann, 79, a former president and a director for 37 years, Link-Belt Company, died in Chicago, Aug. 7. He was also a director of Armour Research Foundation, Illinois Institute of Technology, Gardner-Denver Company, Cardox Corporation and La-Plant-Choate Company, Inc.

New Post Created by 3M—The appointment of Joseph C. Duke to the newly created post of executive vice president for sales administration and public relations has been announced by Minnesota Mining & Manufacturing Co.

Willis Joins Bingham's—James Willis has been appointed assistant sales manager of Sam'l Bingham's Son Mfg. Co., announces Kenneth E. Butler, sales vice president. In this post, he has full responsibility for marketing, sales promotion and coordination of sales in the Midwest.

Crescent Ink Executive—Walter Hamilton has been named vice president and elected to the board of directors of Crescent Ink and Color Co., Atlanta.

A. B. Dick Announces Changes—Alex St. John, general sales manager of A. B. Dick Co. has announced the following changes in the company's Sales Division.

John F. Fraser is promoted to general manager of A. B. Dick Co. of Seattle located in Seattle, Wash.

Wallace J. Darman has been appointed Bridgeport branch manager of A. B. Dick Co. of Connecticut, Inc.

John P. Gilbert is named manager of San Francisco Region VI, while R. A. Dooley becomes special accounts manager.

What Typeface?

Headings in Paper
Tempo Black

Big Italic Headings
Tempo Black Italic

New Printing Equipment
Tempo Black Condensed

Erects Newspaper Building
Tempo Heavy Condensed Italic

Most Popular
Tempo Black Extended

Striking Display Lines
Record Gothic Medium Extended

Ideal for all Marking Devices
Record Gothic Condensed

Appeals to the Most Discriminating Buyer
Record Gothic Extra Condensed

New Library Funds
Record Gothic Bold

Graceful Color Lines
Admiral Script

This Design Has Quality
Florentine Cursive

Demands Beautiful Script
Coronet Bold

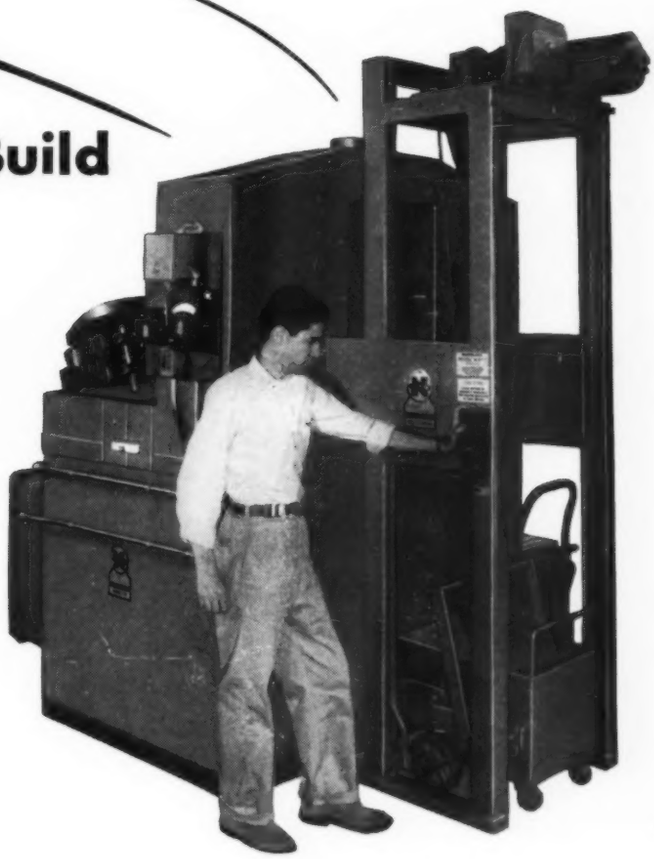
Whether it's a bold, extended letter that delivers a punch . . . the graceful italics and scripts for the gentler touch . . . or the traditional and modern typefaces in beautiful yet conservative design . . . there is a *Ludlow* typeface that meets practically every requirement of the alert layout-man, printer or advertiser. Ask us for complete details.

Ludlow Typograph Co. 2032 Clybourn Ave., Chicago 14

Heading and signature set in Ludlow Hauser Script

For More Information Circle 107 on Reader Service Card

Someday We May Build Two of Our Larger Remelters Exactly Alike...

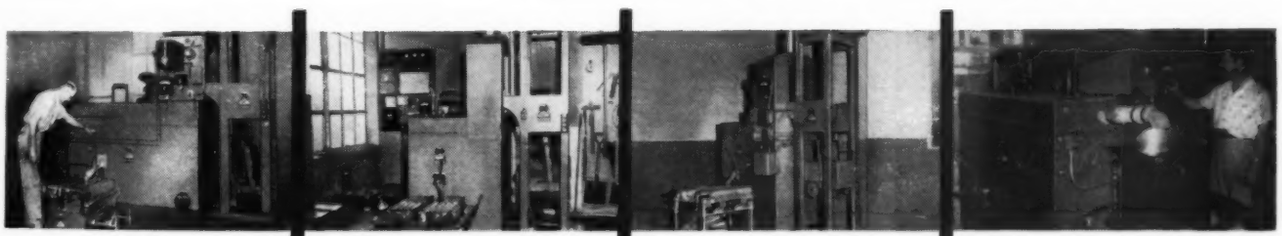


THAT DAY WILL COME when we find two remelt departments with exactly the same needs for production, power, space — and the hundred and one other variables which make the difference in modern, efficient repigging and plate casting. Until then, the installation we produce for you will be a unique blend of NOLAN's performance-proved basic design — adapted to your specific needs . . . and at no more than you would expect to pay for "off the shelf" equipment. Why not let the man from NOLAN give you the full story — right away?

NOLAN 5-ton combination remelter (left) — electrically heated, bottom pouring valve and swing spout for repigging, power driven pump for plate casting. Complete with power agitator, self-indicating thermostat, and high limit temperature control. NOLAN Meltevator automatic loader (right) — push button loading of scrap metal in less than 30 seconds!

Different design . . . the same purpose . . .

Savings in TIME and MONEY!



Milwaukee (Wis.) Journal— remelts up to 12,000 lbs. daily with this 5-ton NOLAN furnace, loaded by the NOLAN Meltevator at right.

Lawrence (Mass.) Eagle-Tribune — average 28 pages, casts 100 or more pigs per shift with 3-ton NOLAN furnace and Meltevator.

Vancouver (Wash.) Columbian — 2-ton NOLAN remelter and Meltevator. Requires only 3 hours per 100 pigs.

Middleboro (Ky.) Daily News 3-ton NOLAN remelter with power agitator and manual pump for plate casting.

WRITE TODAY for full information on NOLAN's "design for savings" . . . a modern remelt installation for your paper's needs.

NOLAN – *design for savings*

NOLAN *Corporation*
ROME, N. Y.

For More Information Circle 214 on Reader Service Card

MEETINGS for the PRINTING INDUSTRY

American Photoengravers Assoc.—1960 Conv., Hotel Statler, Buffalo, N. Y., Oct. 9-12. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Chicago 4.

ANPA Mechanical Conf.—1960 Conf., Hotel Americana, Miami, Fla., June 19-22. Mgr. Richard L. Lewis, ANPA Mechanical Dept., 750 Third Ave., New York 17, N. Y.

Book Manufacturers' Institute—Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf.—Secy.-Treas. George W. Thompson, Toledo Colortype Co., 1711 Jefferson Ave., Toledo, O.

Flexographic Technical Assoc.—1960 Meeting, Palmer House, Chicago, Feb. 4-5. Exec. Secy. Julian Ross, 220 W. 42nd St., New York 36, N. Y.

Graphic Arts Assoc. Executives—1960 Convs., Spring Meeting, Chicago, Apr. 4-5; Fall Meeting, Washington, D. C., Oct. 21-22, Secy.-Treas. Thomas J. Curran, Exec. Secy. Label Mfgrs. Nat'l. Assoc., Inc., 1025 Connecticut Ave., N.W., Washington 6, D. C.

Gravure Technical Assoc. — 1960 Conv., Hotel Commodore, New York, N. Y., Mar. 2-4. Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20.

Great Lakes Mechanical Conf.—1960 Conf., Hotel Schroeder, Milwaukee, Wis., Jan. 17-19. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press*.

Illinois Newspaper Mechanical Conf.—Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News*.

Intl. Assoc. of Electrotypers & Stereotypers, Inc.—1960 Conv., Continental-Hilton Hotel, Mexico City, Mexico, Oct. 23-26. Exec. Secy. Floyd C. Larson, 758 Leader Bldg., Cleveland 14, Ohio.

Intl. Assoc. of Printing House Craftsmen—1960 Conv., Hotel Biltmore, Atlanta, Ga., Aug. 7-10. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19, O.

Intl. Graphic Arts Education Assoc. — 1960 Conf., University of Houston, Houston, Aug. 18-23. Exec. Secy. Samuel M. Burt, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Intl. Printers Supply Salesmen's Guild—Secy. Charles S. Tompkins, Tompkins Printing Equipment Co., 1040 W. Grand Blvd., Detroit 8.

Intl. Typographic Composition Assoc.—1960 Conv., Hotel Statler Hilton, Dallas, Oct. 19-22. Exec. Secy. McKinley M. Luther, Washington Bldg., 15th St. and New York Ave., N.W., Washington 5, D. C.

Iowa Newspaper Mechanical Conf.—1960 Conf., Hotel Fort Des Moines, Des Moines, Iowa, Apr. 9-10. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton, (Ia.) *Herald*.

Kansas-Missouri Newspaper Mechanical Conf.—Kansas Gen. Mgr., Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy-Treas. William A. Bray, Missouri Press Assoc., 115 Walter Williams Hall, Columbia, Mo.

Lithographers and Printers National Assoc.—1960 Conv., Hotel Boca Raton, Boca Raton, Fla., Apr. 24-30. Exec. Dir. Oscar Whitehouse, 1025 Connecticut Ave., N.W., Washington 6, D. C.

National Assoc. of Litho Clubs, Inc.—1960 Conv., Hotel Statler Hilton, Boston, Mass., May 19-21. Exec. Secy. Raymond E. Geegh, 1915-33rd St., S. E., Washington 20, D. C.

National Assoc. of Photo-Lithographers—1959 Conv., Hotel Muehlebach, Kansas City, Mo., Nov. 18-21. Exec. Dir. Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Paper Trade Assoc.—1960 Conf., Hotel Waldorf Astoria, New York, N. Y., March 27-30. Exec. Secy. O. Glenn Leach, 220 E. 42nd St., New York 17, N. Y.

National Printing Equipment Assoc., Inc.—Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

(*Continued on Page 24*)

Hammond RPM-12

Router-Planer-Mortiser

HAMMOND RPM - 12 FEATURES

- An All-Purpose Machine for Routing, Planing and Shell Stereo Mortising.
- Full Newspaper Page Capacity
- Ball Bearing Spindle Driven thru Pulleys and Flat belt by a Standard Constant Speed Motor.
- Narrow Spindle and Two Lights for Clear Operator's View.
- Small Plate Holder for All Operations.

A Hammond RPM - 12 provides you with fast shell stereo mortising for drop-outs, price changes, etc. It also gives you the extras of regular routing and planing.

Hammond Machinery Builders INC.

1604 DOUGLAS AVE. • KALAMAZOO, MICHIGAN

For More Information Circle 223 on Reader Service Card

RECENT INSTALLATIONS BY SCOTT

All-New Equipments and Additions to Existing Plants

Modern, high-speed SCOTT press units, color equipped, 3-2 Folders, and Reelroom equipment were recently chosen by these leading newspapers to meet their requirements for sustained high speed production and flexible spot and ROP Color.

If your plant needs additional pressroom - reelroom equipment to keep pace with increased circulation and color requirements, by all means let a SCOTT engineer help you solve the problem.

WALTER SCOTT & CO.

SCOTT presses

DIVISION OF WOOD NEWSPAPER MACHINERY CORPORATION Plant: Plainfield, N.J.
EXECUTIVE & SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, NEW YORK

For More Information Circle 156 on Reader Service Card

SUPERIOR

BECAUSE...
inserting-stitching-trimming in one operation decreases cost/thousand...

and BECAUSE...
Sheridan automatic saddle-binding equipment offers maximum hourly yield...

we invite Production Executives
to compare equipment claims and performance...and recognize Sheridan Superiority

SUSTAINED PRODUCTION —Sheridan inserter, gang stitcher and multi-knife trimmer units are designed and quality built to minimize non-productive downtime . . . a *bonus* value for increased production.

HIGH OPERATING SPEED — All Sheridan inserters are designed to run at the highest *practicable* production speeds up to 150/min., hour after hour . . . shift after shift. A Sheridan automatic stitcher-trimmer will *outproduce* any comparable machine.

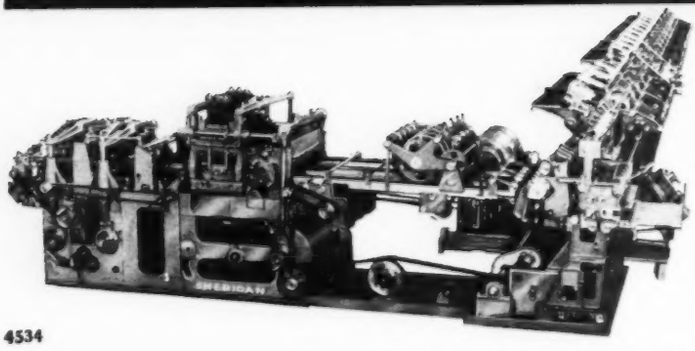
EASE OF LOADING & UNLOADING — inserter has low loading position to eliminate the need for platforms . . . provides improved continuity of loading. Trimmer delivery is at efficient pick-off height . . . can be arranged to suit your needs.

AUTOMATIC REJECT —of books of wrong thickness . . . without stopping production . . . is standard equipment. Caliper is accurate and easily set for each job.

UNDIVIDED RESPONSIBILITY — every unit is built by Sheridan . . . sold by Sheridan . . . serviced by Sheridan.

WIDE RANGE —the Sheridan will automatically insert,stitch and trim books from 3-3/8 x 7" to 12 x 19" one-up, from four pages to 64 or more, to one-quarter inch in thickness (one half inch book thickness), in a wide range of stocks, from thin bond and newsprint to heavy cover stock, with 3,4, or 5 trim cuts.

FLEXIBILITY OF APPLICATIONS—the Sheridan unit construction principle permits arrangement of unit to suit plant layout requirements. Additional units . . . inserter pockets, 3-knife trimmer, five knife trimmer, collecting drum or 2-up attachment . . . can be added at any time to suit production needs. Trimmers can be connected to side or perfect binders. Compare these points (and any others) of Sheridan superiority. Your choice will be Sheridan . . . as it has been with production-conscious plants everywhere. The T. W. & C. B. Sheridan Co. 220 Church Street, New York 13, New York.



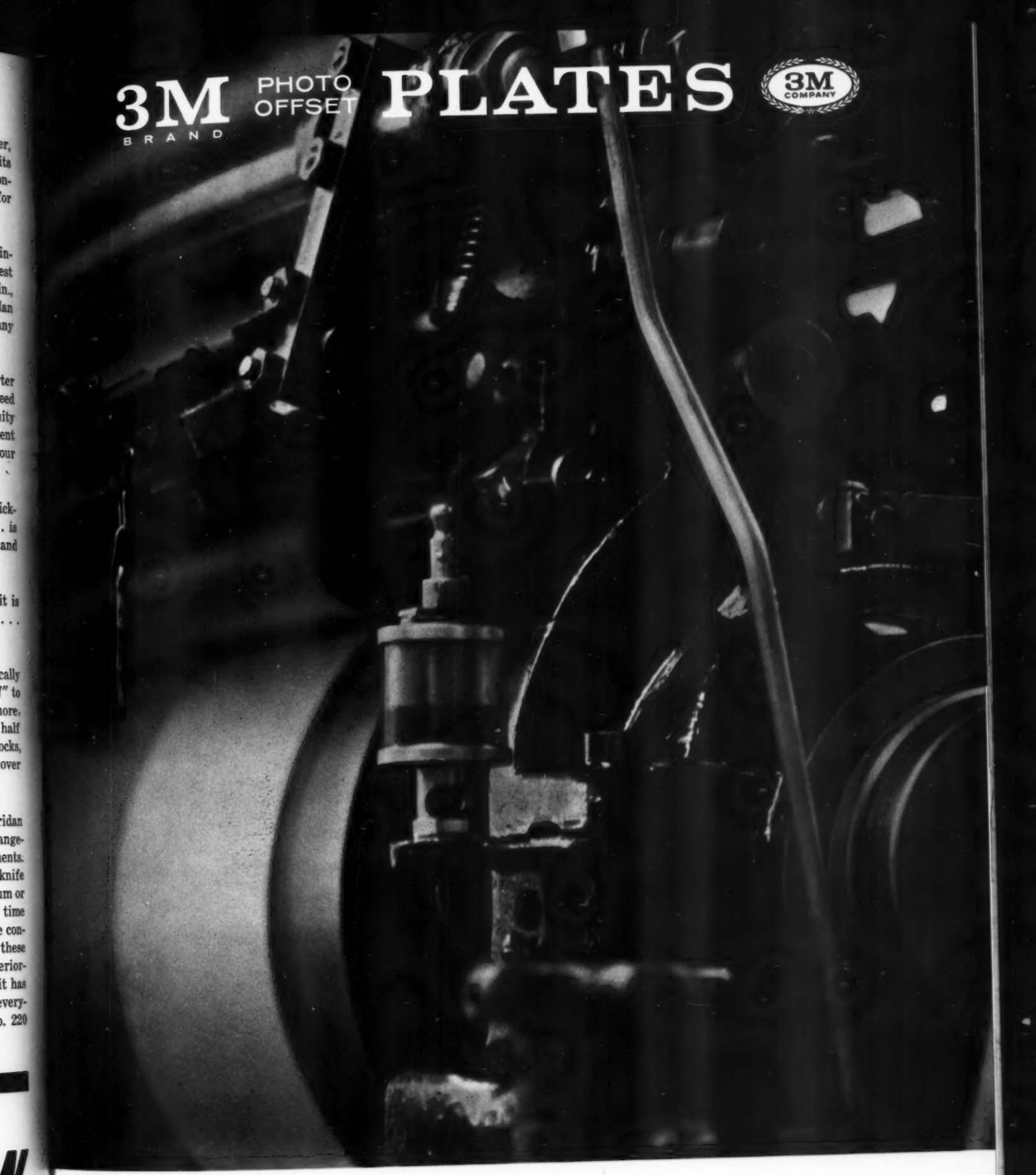
4534

SINCE 1835 **SHERIDAN**

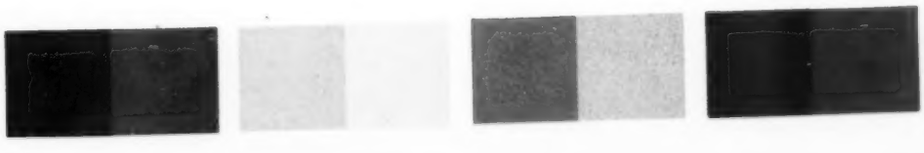
BRANCHES:
Chicago, Ill. Boston, Mass.
Torrance, Calif. London, England

For More Information Circle 157 on Reader Service Card

For More Information Circle 120 on Reader Service Card→



PROOF: Quality lithography depends on the plate



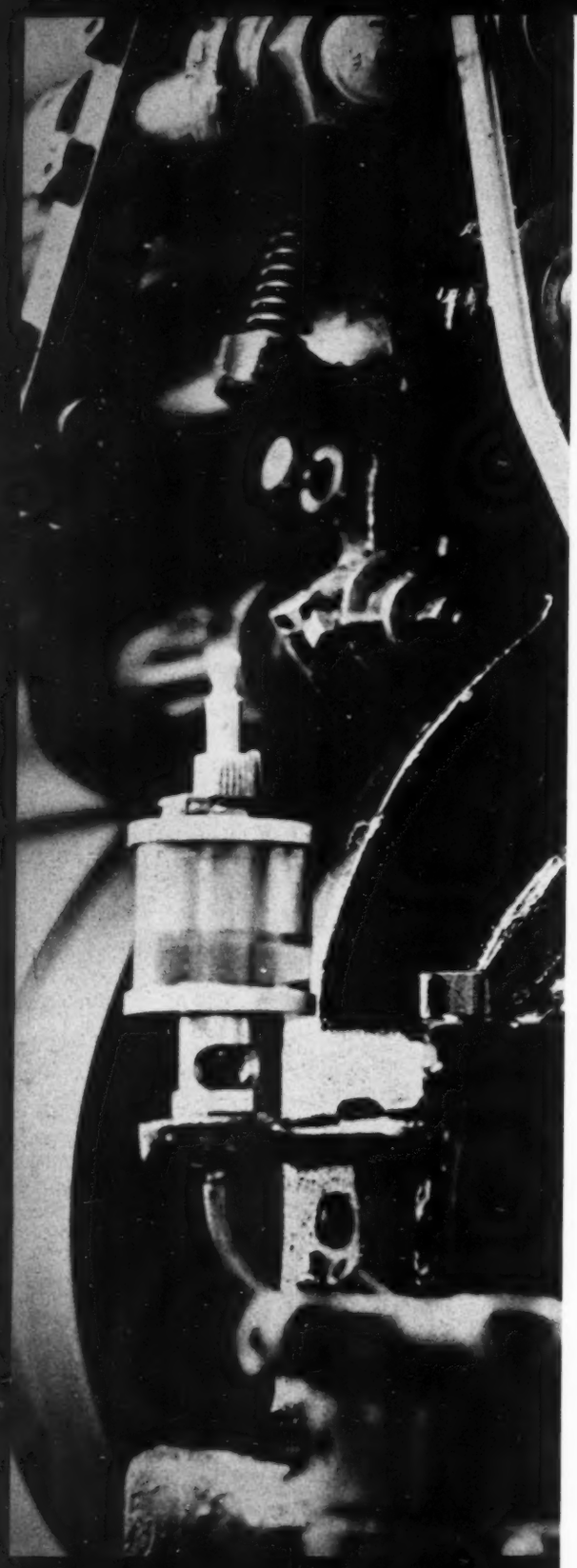


Plate costs are only ¢ of your litho dollar

...so buy the best.

Perfect middletones, sharp highlights ...even with difficult copy!

The flawlessly smooth surface of 3M Brand Photo Offset Plates gives you consistently high quality work—such as in the reproduction on the preceding page. As you see, middletones, highlights, solids and finest detail all reproduce perfectly—even with difficult copy.

With these pre-sensitized aluminum plates inks dry better, don't slur or fill as much. Emulsification is reduced. Up to 25% less ink is needed. As a result colors are truer and more brilliant.

To see the many other advantages of 3M Brand Photo Offset Plates, call your supplier now. He'll quickly show you in your own shop—even on presses taking extra large 48 or 59-inch plates—ways to add both quality and profit to your jobs.

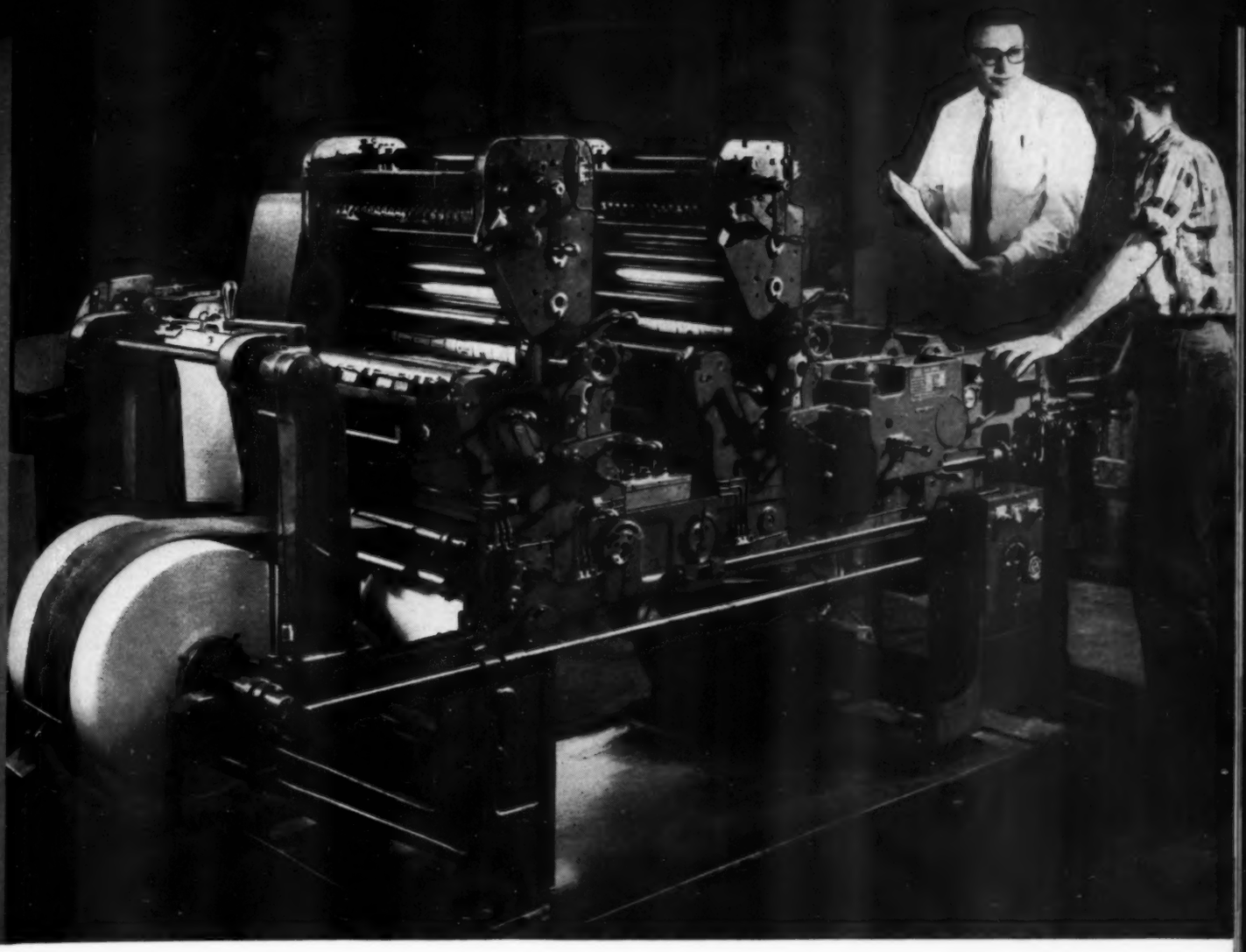
Dependability wears a 3M label

3M
BRAND
Photo Offset Plates

MINNESOTA MINING AND MANUFACTURING COMPANY
...WHERE RESEARCH IS THE KEY TO TOMORROW

St. Paul 6, Minn.

"3M" IS A REGISTERED TRADEMARK OF MINNESOTA MINING AND MANUFACTURING CO., ST. PAUL 6, MINNESOTA. GENERAL EXPORT: 99 PARK AVENUE, NEW YORK 16, N. Y. IN CANADA: P. O. BOX 757, LONDON, ONTARIO.



"I thought some of the claims for this ATF Green Hornet were fantastic!"

reports **Leonard Stone**, President, MULTICOLOR PRINTING AND OFFSET CORPORATION, Cleveland, Ohio

So he surveyed all printers who had purchased these web offset job presses...Mr. Stone prepared a 16-point questionnaire about the press and mailed it to every plant operating an ATF Green Hornet. 75% of the owners replied, giving their frank appraisals. The result? Mr. Stone installed his Green Hornet about a year ago.

Multicolor's offset equipment includes an ATF Chief 15 and also a 17 x 22" press, and Mr. Stone reports, "On most jobs, the Green Hornet beats the 17 x 22. Before the 22 can take over from the Chief 15, the Green Hornet is ahead on price. Makeready is fantastically short, and the speed and over-all efficiency open doors previously closed to us.

"We are now very competitive in both quality and price on work formerly done on larger, slower sheet-fed presses," says Mr. Stone, "and we can even print using only one color unit and still be competitive." Other advantages he cites are the ease with which an experienced sheet-fed pressman mastered press operation, and the savings in cost for stock purchased in rolls. "Paper in rolls is so much cheaper that the difference pays for the waste and still leaves a profit," he says.

Question: ARE YOU READY to compete for your share of the profitable printing this press can produce —at speeds up to 30,000 sheets per hour printed in two colors? If you'd like to explore the possibilities, your ATF Representative will provide facts and figures. ATF is the acknowledged leader in building web offset equipment—and, whether you require a two-color, three-color or four-color Green Hornet, or larger web presses, if you are ready to talk web offset...*talk with ATF first.*

ATF type faces used in this advertisement: Craw Clarendon, News Gothic Condensed with Franklin Gothic Condensed, Century Expanded.

ATF

AMERICAN TYPE FOUNDERS

200 Elmora Avenue, Elizabeth, New Jersey

For More Information Circle 10 on Reader Service Card

THE NATION'S LEADING NEWSPAPERS CHOOSE CUTLER-HAMMER WEBMASTER UNIT PRESS DRIVES

Sentinel Cameras Catch The Race Action And Sidelights – Page 3-D
Orlando Sentinel
'Tis a Privilege to Live in Central Florida
Nice And Fair
GATEWAY TO THE MOON
9 unit 1 folder press equipped with A-c Webmaster Drives and Control
100,000 E
Miler
Weather Forecast
The Hartford Times
HARTFORD (D), CONN. SATURDAY, FEBRUARY 14, 1959
Equips new 10 unit 2 folder press with Cutler-Hammer Webmaster Drives
Tax Scheme Charged to
Dulles Has
Continues on
LLOP
Sports
San Francisco Examiner
AMERICA FIRST
MONARCH OF THE DAILIES
FINAL
MONDAY, FEBRUARY 23, 1959
New press addition uses A-c Webmaster Drives and Control
8 unit 1 folder press uses Cutler-Hammer A-c Webmaster Drives
New Haven Evening Register.
WITH SUNDAY MORNING EDITION
NEW HAVEN 3, CONN., THURSDAY, FEB. 12, 1959
POLICEMEN
Cities Hard
Friday's Forecast
Sunny, Cold
The Montreal Star
POSTSCRIPT
EDITION
PRICE FIVE CENTS
91st Year, No. 12
60 Pages
MONTREAL, THURSDAY
New 25 unit 5 folder press plant uses A-c Webmaster Drives and Control
Metro Due To Meet
Presidents Meet in Acapulco
Seaway
Confirmed

The Salt Lake Tribune
Macmillan, Nikita Underline
Split 'Difficulties'
Tax Bill Passes
House
Cutler-Hammer Webmaster Drives installed in new 10 unit 2 folder press plant
The Evening Star
Metropolitan Edition
WASHINGTON, D. C., TUESDAY, FEBRUARY 24, 1959
Modern 42 unit 6 folder press plant equipped with A-c Webmaster Drives, C-H Conveyors, and new Newspaper Counter-Stackers
CHICAGO DAILY SUN-TIMES
FINAL
Language
C-H Webmaster Drives and Control ordered for press modernization
EASTON EXPRESS
HOME EDITION
EASTON, PA., WEDNESDAY
SEVEN CENTS
New 5 unit 1 folder press equipped with D-c Webmasters
Ike Says West Won't Start
3 Homes Wrecked By Snowslide
Wants Dulles To Remain As
Being First To Fire If

...Cutler-Hammer offers the first and only complete line of unit press drives and control to meet the specific requirements of each unit press installation. Only Cutler-Hammer provides both an A-c and a D-c Webmaster Unit Press Drive.

When you are planning a new press plant or modernizing existing facilities, no longer is it necessary to compromise in the selection of the Unit Press drive to be installed. Cutler-Hammer will provide the right type and size drive selected on the basis of a thorough analysis of your particular operational requirements, plant power characteristics, future plans, etc. Get all the facts today, write... Dept. W227, Cutler-Hammer Inc., Milwaukee 1, Wis.

CUTLER-HAMMER
CONTROL
C-H

CUTLER-HAMMER

Cutler-Hammer Inc., Milwaukee, Wis. • *Division:* **Airborne Instruments Laboratory.** • *Subsidiary:* **Cutler-Hammer International, C. A.**

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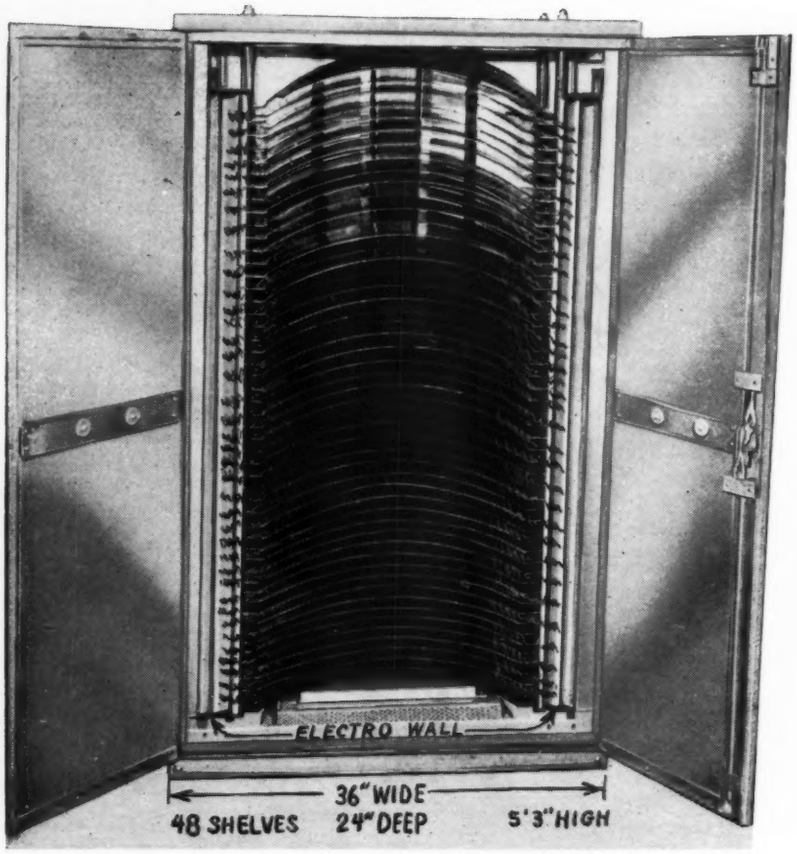
For More Information Circle 47 on Reader Service Card



ELECTRO WALL

Stereotype

MATRIX STORAGE CABINET

This cabinet has been designed for storage of page, color and black and white mats at casting temperature.

Exclusive "Electro Heat", covering two entire wall surfaces, insures heat circulation between mats, and keeps mats conditioned for recasting.

48 Separate shelves allow storage of 240 mats at one time.

Completely insulated, with cabinet type doors. Uniform temperature is controlled by a thermostat.

Sliding shelves allow storage of No Pack Mats, without curling.

PRICE $850.00 F.O.B. LYNNFIELD, MASS.

A.P.S. Inc.

AMERICAN PUBLISHERS SUPPLY INC. P. O. BOX 421 LYNNFIELD, MASS.

For More Information Circle 8 on Reader Service Card

Meeting Dates

(Continued from Page 16)

National Safety Council Printing and Publishing Section—1960 Meeting, Nov. 17-21. Staff Rep. Harry C. Johnson, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Composing Room Executives Assoc.—Secy. Lewis R. Greene, Westerly (R. I.) *Sun.*

New England Newspaper Mechanical Conf.—1960 Conf., Hotel Statler-Hilton, Boston, Oct. 15-16. Secy.-Treas. Walter C. Crighton, New London (Conn.) *Day.*

Newspaper ROP Color Conf. — Secy. Arthur Brashears, American Assoc. of Newspaper Representatives, 141 E. 44th St., New York, N. Y.

New York State Capital District Mechanical Conf.—1960 Conf., Hotel Sheraton Ten-Eyck, Albany, N. Y., May 14-15. Conf. Dir. Floyd Laurenty, *Times-Union*, Albany 1, N. Y.

Northwest Mechanical Conf.—1960 Conf., Hotel Leamington, Minneapolis, Feb. 27-29. Secy.-Treas. Ralph N. Carson, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis, Minn.

Pacific Newspaper Mechanical Conf.—1960 Conf., Multnomah Hotel, Portland, Ore., Sept. 23-25. Secy. Donald Newhouse, Portland (Ore.) *Oregonian.*

Packaging Institute Assoc.—1959 Meeting, Hotel Statler, New York, N. Y., Nov. 16-18. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1960 Conv., Hotel Sheraton Park, Washington, D. C., Oct. 24-27. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave. N. W., Washington 15, D. C.

Research and Engineering Council—1960 Conf. Hotel Dayton-Biltmore, Dayton, O., May 23-25. Managing Dir. Robert E. Rossell, 5728 Connecticut Ave. N.W., Washington 15, D.C.

Screen Process Printing Assoc., Intl.—Exec. Secy. Robt. H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1960 Conf., Hotel Dinkler-Tutwiler, Birmingham, Ala., Aug. 14-16. Secy. Walter C. Johnson, jr., P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1960 Conference, Hotel Marion, Little Rock, Ark., Mar. 6-8. Secy. Claude V. Capers, P. O. Box 1569, Chattanooga 1, Tenn.

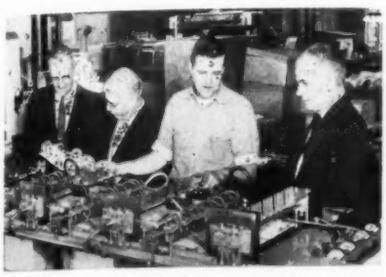
Southern Graphic Arts Assoc.—1960 Conv., Hotel Eola, Natchez, Miss., Apr. 21-23. Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Technical Assoc. of the Graphic Arts—1960 Conf., Hotel Park-Sheraton, Washington, D. C., June 20-22. Secy.-Treas. Cyril A. Horton, Research Laboratories, Eastman Kodak Co., Rochester 4, N. Y.

(Advertisement)

Up-dating Bindery helps hold prices DOWN

In spite of other increases in printing costs, Cohen Brothers Printers "hold the line."



R. E. MacIntyre, sales manager and Louis Cohen, president of Cohen Brothers Printers, with Kenneth Shope, Speed-Klect operator and John Hyduke, plant superintendent.

The experience of Cohen Brothers Printers, offset printing firm of Harrisburg, shows how a well-organized bindery operation can help defeat inflationary prices.

For example, by installing the Dual-Stream Speed-Klect Sheet Collator, Cohen Brothers were able to realize savings of almost 50% over previous hand collating methods.

"One job that used to cost us 9½ cents a set to collate by hand, now costs us 4¾ cents a set," said R. E. MacIntyre, sales manager. "It impresses our customers very much when they see our automated gathering, and it makes a very nice talking point.

"We use our Speed-Klect in our sales pitches, saying it gives us a lower cost per unit, and helps us maintain our delivery schedules. Speed-Klect time is predictable, whereas hand gathering time is not."

Daily Average: 225,000 Pickups

Louis Cohen, President of Cohen Brothers said, "On our Dual-Stream Collator, we handle sheets and also gather signatures up to 16 pages. We gather, roughly, 30 million sheets per year on our Dual-Stream Model 51-11G. The combination collating we do, pre-collating the work on our Speed-Klect and then sending it through a second time, is a tremendous advantage over any other type of collating.

"We average 225,000 pickups or more a day on a single shift and have had a maximum output of 275,000 sheets in a single shift.

"When we first bought our Speed-Klect, a little over a year ago," Mr. Cohen continued, "we were using two shifts to catch up on our collating. We soon found out the Dual-Stream could gather faster than our presses could print the stock, so we have now cut to one shift."

Good Success with Gluing

Cohen Brothers Printers, specialists in church pamphlets and literature as well as advertising brochures, also do gluing work of business forms and other gluing work when their regular sheet gathering of church pamphlets and advertising brochures permit. They have had very good success with the gluing work they have done.

"We feel our Speed-Klect saves at least 40% of the cost of semi-automatic tipping machine operation," said Mr. Cohen, "plus the fact that we get the job faster for delivery."

One Operator—One Helper

Cohen Brothers use one operator and one helper on their Dual-Stream collator. By using the extended delivery belt (creeper belt) that they purchased from Didde-Glaser, they use two lines and two helpers, which, in effect, gives them two collators gathering with one operator. The helpers each take completed sets from one stream of the Dual-Stream and insert them in envelopes. According to Mr. Cohen, if they had to do this by hand, it would require at least 12 girls doing nothing but collating.

High-Speed Accuracy

In addition, he said, due to the micromatic detector system on the Speed-Klect they get no misses or doubles. This is very important to them since their work must be very accurate.

"Girls make mistakes," MacIntyre said, "But the Speed-Klect doesn't!"

Operators like Cohen Brothers Printers have found the Speed-Klect so successful because it is the only fully automatic sheet collator in the world to successfully gather and glue *even one-time carbon sheets* at high speeds.

In addition to the Dual-Stream Sheet Collator that doubles even automatic production, by allowing the same job to be "dual-streamed" side-by-side or two different jobs side-by-side, Speed-Klects are available in 3-, 5-, 6-, 7-, 8- and 9-station standard models, special sizes with additional stations to order. Almost any kind of stock can be accommodated for gathering and gluing—from one-time carbon forms to pre-collated sections. Any Speed-Klect may be used for straight gathering, simply by cutting off the glue supply.

Complete information and specifications may be obtained by writing directly to: Didde-Glaser, Inc., Dept. PP-11, 50-Hiway and W. 12th Avenue, Emporia, Kansas.

Cohen Brothers' Speed-Klect operator, Kenneth Shope, left, keeps his eye on the high-speed gathering operations of Dual-Stream Model 51-11G. John Watkins is the helper.

For More Information Circle 53 on Reader Service Card

Mat Pak gets editions on the street—fast

MATRIX BACKING

cuts mat processing time in half, saves money!

Mat Pak gives you better plates and half-tones with deep, automatic, uniform packing—quality reproduction at less cost. With Mat Pak, your processing time is cut in half to give extra speed from composing room to press room, speed needed to meet close deadlines. Mat Pak has been used with greatest success in full production by leading newspapers for as long as two and one-half years. For your newspaper, Mat Pak will help curb rising production costs and ease the manpower shortage. Give Mat Pak a trial. Write to Kimberly-Clark Corp., Neenah, Wisconsin, Dept. Number PP-119.

Mat Pak is a trademark of KIMBERLY-CLARK CORP.

Kimberly-Clark Corporation
NEENAH, WISCONSIN

For More Information Circle 101 on Reader Service Card

"Changing inks‡ on the COLOR-MATIC is as easy as reaching for a tray of ice cubes"

‡*Changing inks on the COLOR-MATIC is a matter of seconds! The convenient ink container plugs into place with the ease of replacing an ice tray!*

■ Some things in life are *really* easy. *The newest of these is changing inks on the* COLOR-MATIC*! When you see it done, you'll say, "Great Day, why didn't somebody think of that one before!" This means that the headaches of inking, so common to earlier presses, have been, with the advent of the COLOR-MATIC, lifted right out of the pressman's life forevermore! For now, the already famous Hoe inking system has been streamlined to the ultimate on the COLOR-MATIC, and the outlook is for trouble-free inking days for the pressman from now on in. Why not look into the *many,* really revolutionary new features of this famous new press unit? Just call your Hoe man today to see it!

*TRADEMARK

R. HOE & CO., INC.

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For More Information Circle 88 on Reader Service Card

HELPFUL LITERATURE

FOLDERS · Sales Aids · Instruction Sheets · BULLETINS · Catalogs · BOOKLETS · Brochures

Circle Numbers on Reader Service Card in This Issue

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. PRINTING PRODUCTION will forward your request.

Composing Room

RCA ELECTRO-TYPESETTERS

Advantages and operating features of Electro-Typesetters marketed by Radio Corp. of America are described in a brochure. The equipment is claimed to permit linecasting machines to set type automatically at speeds up to 540 characters per min. Circle No. 310 on Reader Service Card.

MONOMELT MAGNESIUM BASE

Magnesium newspaper base is the subject of a folder offered by Monomelt Company, Inc. Base is finished to +0.001 in. high and is available in all heights and sizes. Larger sizes are recommended for light weight proof press beds. Circle No. 332 on Reader Service Card.

PHOTOGRAPHIC DRAFTING

Application of photographic composition to drafting through the use of the Fotosetter is the subject of a 12-page booklet issued by Intertype Company, Div. Harris-Intertype Corporation. Fotosetter keyboard has 228 electrical symbols available. Circle No. 309 on Reader Service Card.

ROUSE EQUIPMENT CATALOG

The Rouse band saw and power miterer are discussed in a catalog prepared by H. B. Rouse & Co. Information about Rouse's lead and rule cutters, composing sticks, type gauges and other equipment is included. Circle No. 315 on Reader Service Card.

PHOTOCOMPOSITION SYSTEM

Mergenthaler Linotype Company has made available a booklet describing its Linofilm photocomposition system. The steps of the system are outlined, and the necessary equipment is shown. Examples are included. Circle No. 323 on the Reader Service Card.

FISK ALIGN-A-MAT

Descriptive literature is available regarding the Fisk Align-A-Mat for re-aligning Linotype and Intertype matrices. Distributor stops due to lugs worn short will also be eliminated, according to Fisk. Circle No. 331 on Reader Service Card.

MATRIX CONTRAST SERVICE

A booklet explaining Matrix Contrast Service is available from the Matrix Contrast Corp. According to sponsor, contrasted matrices reduce composition errors on linecasting machine composition. Circle No. 335 on Reader Service Card.

STAR QUADDER BULLETIN

Functions of the Star Selectro-Matic Quadder in quadding left and right or centering on linecasting machines are explained in an eight-page color bulletin offered by Star Parts, Inc. Circle No. 330 on Reader Service Card.

PERFORATOR TAPE SAMPLES

A descriptive booklet containing samples of Perfection perforator tape for Teletypesetting is being offered by Paper Manufacturers Co. Circle No. 316 on Reader Service Card.

TYPE FACES BY LINOTYPE

A book of 13 type faces has been published by the Mergenthaler Linotype Co. Accompanying each type face are specimens and suggestions for its use. Circle No. 313 on Reader Service Card.

Platemaking

CHEMCO POWDERLESS ETCHING UNIT

Literature on the Chemco Zinc-Matic powderless etching machine is offered by Chemco Photoproducts Co., Inc. The machine is said to etch plates in sizes from 5 in. by 8 in. to 20 in. by 24 in. Circle No. 328 on Reader Service Card.

BRIGHTYPE SAMPLES

Samples of the Brightype photographic process for direct conversion of any letterpress form to film or photo paper are offered by Brightype Service. Brightype products include right reading positives or negatives, wrong reading positives or negatives, and right and wrong reading paper prints. Circle No. 343 on Reader Service Card.

ALL METAL DARKROOM CAMERAS

W. A. Brown Manufacturing Co. has issued an illustrated brochure describing its Commodore line of all metal darkroom cameras. Features of the cameras are shown; specifications, listed; and a list of optional accessories, included. Cameras come in 24 in., 31 in., and 18 in. by 22 in. sizes. Circle No. 317 on Reader Service Card.

POWDERLESS ZINC ETCHING MACHINE

A booklet describing the Mark III powderless zinc etching machine has been made available by Tasope Company. Various features of the Mark III are shown in diagrams and photographs, and some principles of powderless etching are explained. Circle No. 318 on Reader Service Card.

PHOTOGRAPHIC PRINTING METHOD

New techniques used by the U. S. Navy to produce printed matter from tabulating cards and to store whole pages or forms on microfilm inserted in aperture cards are discussed in a 12-page reprint issued by the Filmsort Company, Div. of Miehle-Goss-Dexter, Inc. Illustrated, the reprint outlines the process and lists all equipment used. The reprint is partially produced by the technique. Circle No. 319 on the Reader Service Card.

ELECTRONIC ENGRAVING MACHINES

A 16-page illustrated brochure on the Scan-A-Graver and Scan-A-Sizer electronic engraving machines has been issued by Fairchild Graphic Equipment, Div. of Fairchild Camera and Instrument Corp. Circle No. 341 on Reader Service Card.

Pressroom

ATF WEB OFFSET PRESSES

A 12-page booklet on the ATF Webendorfer line of web offset publication presses has been made available by American Type Founders Co. The presses are described and illustrated in detail. Features include ATF's patented cylinder arrangement, cylinder size web lead rollers, heavy duty roll stands and high speed folder. Circle No. 325 on Reader Service Card.

SPHEREKOTE DRAWSHEETS

A sample swatch of Spherekote drawsheets is available from Minnesota Mining and Mfg. Co. Drawsheet surface is formed by glass beads fused to a resilient rubber base. Circle No. 338 on Reader Service Card.

HANTSCHO PRINTING EQUIPMENT

An illustrated booklet describing Hantscho presses, folders, sheeters and roll stands is available from George Hantscho Co., Inc. The equipment is for sheet signature or rewind delivery. Circle No. 339 on Reader Service Card.

MINIATURE NUMBERING MACHINE

A data sheet on the Wetter Miniature which numbers checks and documents has been prepared by Wetter Numbering Machine Co. The ⅝ in. wide numbering machine is of one-piece steel frame and has a *T* slotted bottom plate. Circle No. 333 on Reader Service Card.

SCOTT PRESSROOM EQUIPMENT

Literature is available from Walter Scott & Co. concerning its high speed newspaper press units equipped with Wood reels, tensions and autopasters. Information about the Scott 3-2 ratio folder is also given. Circle No. 311 on Reader Service Card.

CROSFIELD REGISTER CONTROLS

A brochure outlining the operations of register controls has been published by Crosfield Electronics, Inc. Controls are available for color register, web sidelay, folders, sheeter, die cutters, and web inserters. Circle No. 329 on Reader Service Card.

TWO COLOR OFFSET PRESS

The ATF Chief 226 is described in an illustrated American Type Founders Co. product bulletin. The 20 in. by 26 in., two color offset press features a double-loading floor type feeder and a common impression cylinder. Circle No. 324 on Reader Service Card.

EQUIPMENT TO HANDLE PAPER ROLLS

Wood Newspaper Machinery Corp. has prepared literature on reels, tensions, and autopasters for offset presses. The equipment is said to handle paper rolls up to 50 in. wide with a 40 in. diam. Circle No. 307 on Reader Service Card.

ROTARY NUMBERING HEADS

Force rotary numbering heads for numbering tickets, labels, tags, and coupons are discussed in a 48-page booklet issued by Wm. A. Force & Co. Included are descriptions of heads, cams, and adapters for numbering jobs. Circle No. 336 on Reader Service Card.

LITHO INK REFERENCE GUIDE

A Reference Guide to Lithographic Ink is the title of a booklet issued by the Educational Division, Polychrome Corporation. Such topics as, *What is a Litho Ink, What are the properties of Litho Inks,* and *Problems with Litho Inks* are discussed in this 13 page booklet. Circle No. 344 on Reader Service Card.

3M TYMPAN COVERS

Sample swatches of glass armored Spherekote tympan covers can be obtained from Minnesota Mining & Mfg. Co. The tympans protect makeready and packing against press pounding. It is claimed Spherekote tympans resist ink, perforate without metal shims, and reduce static problems. Circle No. 345 on Reader Service Card.

ROTARY NUMBERING EQUIPMENT

The installation and use of numbering heads, mounting rings, adaptors and cams has been explained in a four-page booklet issued by Roberts Numbering Machine Div., Heller Roberts Mfg. Corp. Circle No. 306 on Reader Service Card.

(Continued on Page 89)

Automatic bundling machine saves $37,000 a year

AT FORT LAUDERDALE NEWS

At the Fort Lauderdale News an automatic USS Steel Strapping Machine Model 12 compresses, wraps, tensions, ties and ejects an average of 70,000 papers a day, seven days a week. It has cut operating costs at least $37,000 dollars a year over the previous method of bundling. Even when special sections are inserted in the paper by a crew of 33 "extras," there is no delay in production. On a recent Saturday—the only day when one edition is run—60,000 copies of a 56-page paper were put out in less than two hours, and the press run, insertion of special sections and strapping were all finished almost simultaneously.

Model 12 handles bundles from 4 to 14 inches thick and makes up to 24 ties a minute. The lightweight, high-tensile #18 gauge USS Steel Strapping is economical and holds papers securely, even when bundles get a fast, four-story circular chute-ride to the loading platform.

Mr. J. Millard Cain gave other reasons for his paper's purchase of the USS Steel Strapping Automatic Model 12 during a recent interview: "It costs less than competitive equipment; it presents no maintenance problems; and steel strapping costs less and is easier to handle."

Free Technical Assistance. Our Strapping Specialists are available to assist you to work out bundling and packaging procedures that will help speed up your operations. For further information just fill in the coupon below.

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formerly Gerrard Steel Strapping
Steel Service Centers and
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Please send me a free copy of your Sweet's Catalog Insert, and have a Strapping Specialist call.

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Company _____

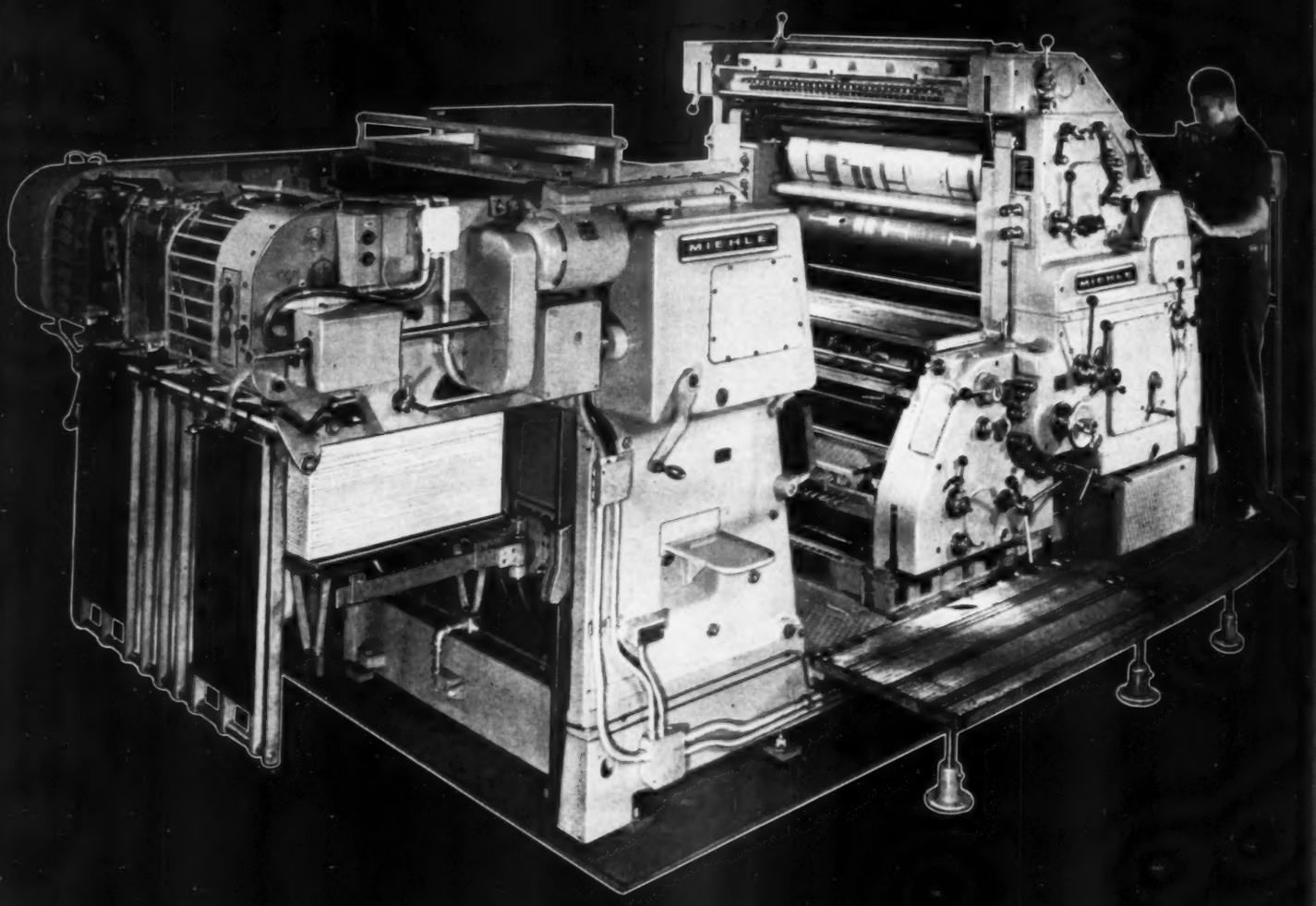
Address _____

City _____ **Zone** _____ **State** _____

For More Information Circle 70 on Reader Service Card

Another New MIEHLE Offset Press!

THE 29 TWO COLOR



...with many Exclusive Miehle Advantages...

Now, a companion two color to the famed Miehle 29 Offset Press is available... designed to give you all of the new production advantages and exclusive features of both the 29 Single Color and the popular Miehle 38 Two Color.

Handling a full 23 x 30″ sheet at speeds up to 7000 per hour, this modern new offset press will give your close register two and four color production runs a big boost. Take time now to investigate all of the important benefits that can be yours with the Miehle 29 Two Color.

- **Precision Swing Gripper Register At Any Speed**
- **Non-Stop Feed—Continuous Delivery**
- **Miehle's Exclusive True Rolling Cylinders**
- **Feed Table Safety Bar**
- **Automatic and Sealed-In Lubrication**
- **Simplified Feeder Set-up**
- **Ink Vibrator Moisture Control Blower**
- **Plate Changeability With 29 Single Color**

THE MIEHLE COMPANY

Division of Miehle-Goss-Dexter, Inc.

Chicago 8, Illinois

For More Information Circle 117 on Reader Service Card

PRINTING PRODUCTION
NOVEMBER 1959

Determine Your Own LITHO PLANT COSTS

By FRANK R. TURNER, Jr., *Cost Accountant*
National Association of Photo-Lithographers

ONE of the shortcomings of the lithographic industry is the lack of cost knowledge. Over the past 10 years, we have set up budgeted hourly cost rates for well over 500 printing and lithographic firms located throughout the United States, Canada and Cuba. Most of these firms are members of the NAPL. Approximately 15% of these firms have good cost systems in operation; cost systems which yield the desired cost information on time so the result can be put to specific use promptly.

Another 25% of these firms had a cost system, but on checking we found some of it was built on unsound basic information, or was far out of date, thus making the resulting cost information quite misleading. This group of lithographers usually receive their cost rates long after the end of a given period and as a result they merely look it over and file it in the desk drawer. A fair measure of applied common sense could easily have made the accounting practices of these companies effective and worthwhile.

Now in considering the remainder of these 500 firms, let me say that this is the group of lithographers who create the very low 3% profit level of the lithographic industry. These are the litho houses that constantly find themselves slipping downhill or actually, over an agonizing period of time, going out of business.

Briefly stated a cost system should be set up in such a manner that every dollar a lithographer spends on materials, labor and overhead is funneled down through various cost pipelines. Customers should be charged for every dollar the lithographer pays out plus a desired profit to cover services rendered, materials consumed and the necessary processing. The reader will note in the charts accompanying this story: how we have set up the capital investment for a small plant; how we have treated the variable costs; how wages have been handled; how administrative and selling expenses have been treated; and the manufacturing and all-inclusive hourly rates on several rates of productivity result.

We believe that it is good business to operate on the basis of a budget showing an estimate of the cost of operating your entire plant over a future 12 month period. A budget also should be reviewed or revised every time elements of costs in that budget are increased.

The lithographer who operates on a sound basis normally has a uniform accounting and cost system installed in operating his plant. He knows for a certainty what his costs are, what he can do competitively, where the breakeven profit or loss level is. He knows what the factory hourly rates are for all of his departments. He knows, too, what all-inclusive hourly costs for these same departments are. He can easily arrive at the cost per thousand impressions at various production levels.

Under proper direction and through a well organized cost department he can develop time standards for all work operations. It is one thing to know that it costs $20 an hour to operate a press turning out 2000 impressions per hour, namely at a cost of $10 per thousand impressions. He knows, too, that a press may cost $30 an hour and be less expensive than the $20 an hour

press since it turns out 4000 impressions per hour or $7.50 per thousand.

Sound management knows why it budgets hourly rates, what its time standards are, why it marks up materials and outside work sold and the fact that this percentage of mark-up is rigidly adhered to by the estimator. Compare this with the picture where unsound management guesses that it will take "so long" to do a job, the rate should be about "so much," and maybe they can get "some kind" of a mark-up on material and outside work sold.

This article is intended to bring home the question of no profit or some losses to those who do not possess the first requisite of sound cost accounting.

Need Cost Education

No single individual, no association, or the combined efforts of all can ever hope to make everyone in an industry cost conscious. Cost work is educational in nature. Through careful study and sound demonstration, management is enlightened; through persuasion the costing methods of the lithographer can be improved. There will always be a new crop of lithographers entering the competitive scene which creates a need for sound cost accounting methods.

May we suggest that you take every item of cost in your plant and note it alongside the study carried here. In this manner you can set up your own hourly rates. The NAPL services are equipped for providing this to member companies.

We have just published *A Study of A Simplified Method for Building Budgeted Hourly Cost Rates in A Lithographic Plant* which shows cost of both plant and all-inclusive costs of operating practically all cost centers used in the lithographic industry. It shows these rates for one- and two-shift operations on several rates of productivity.

Printers should know what items go into their rates and which items should not be included. For example, on Direct Supplies, where the lithographer sells labels or some other product on so much per thousand. He does not make out an estimate to show the cost of all art work, film, plates, bronzing, embossing, varnishing and ink. Therefore, he must include in his hourly rate all these direct supplies so that when he sets up his price list, all of these items of cost are included in the rates.

On the other hand, where every job a lithographer sells is pretty much tailor-made, he should *not* include Direct Supply items in the hourly rates. These items should be recouped in every estimate when the lithographer sells on a job cost basis. In this particular work, we show the cost of producing lithographic work on a straight-time basis, time and one-half time basis and double-time basis. Many a job is taken on a straight-time basis then produced on overtime rates. Better to know what hourly costs will be than to operate in the dark.

Establish Departmental Costs

The first requisite of good management is that of establishing sound departmental hourly costs based on specific costs in the plant concerned. It is easy to obtain and use hourly costs or a price list used by a competitor, but when a plant owner operates on such a basis, he never knows whether his costing is right or wrong. A competitor's price list or hourly costs may have been figured for equipment for wages, hours and working conditions quite different from that used by you. To pick up data from a competitor and put it in use without reference to specific costs in your plant can be ruinous.

In the thought that this kind of information would be of value both to those who are planning to buy a plant and to those who are operating lithographic equipment, without knowing their own costs, we outline herewith a procedure for setting up lithographic departmental hourly costs. This pro forma study we believe is complete enough so that the reader can set up his own schedules based on his particular costs.

DEPRECIATION — There is a divergence of opinion as to the life expectancy of various kinds of lithographic equipment. Depreciation rates should be determined in the light of such considerations as: (1) Whether the equipment was purchased as new or used equipment; (2) How hard the equipment will be used; (3) How well it is to be cared for, and (4) Whether technological improvements and early obsolescence may warrant heavier annual write-offs than normal. In this study based on new equipment, we have used a depreciation rate of 7½% per annum.

SPACE—The floor space necessary depends on the kind of product to be manufactured. It is suggested that in figuring floor space, some tolerance be included in the computations for storage, aisles, etc. Better a little too much, than much too little.

RENT COSTS vary from city to city. However, in this study we have used an arbitrary rate of $1 per year per sq. ft.

INSURANCE as shown herewith has been figured on a rate of $3 per thousand dollars of investment in machinery and equipment.

DIRECT LABOR — The largest cost item in this computation is direct labor. Skilled men in the

CAPITAL INVESTMENT—CHART A

Assume that a lithographic plant will operate the following equipment:

1. Camera—24" complete with lens, screen arc lamps, darkroom, sinks, etc.	$11,600.00
2. Stripping table	500.00
3. Opaquing table	500.00
4. Vacuum frame, whirler, developing sink, etc.	5,650.00
5. Two presses, 17½ x 22½"	33,070.00
6. One press, 23 x 36"	32,025.00
7. One paper cutter, 41"	7,075.00
Total investment in Machinery	$90,420.00

WAGES—CHART B

Wage schedule for this pro forma study

	Per Week	Per Year
Cameraman	$ 128.61	$ 6,687.72
Stripper	132.00	6,864.00
Opaquer	132.00	6,864.00
Platemaker	132.00	6,864.00
Two pressmen—17 x 22"	240.32	12,496.64
One pressman—22 x 34"	125.92	6,547.84
One operator—22 x 34"	98.03	5,097.56
Cutter—39"	107.45	5,587.40
	$1,096.33	$57,009.16

BUDGETED HOURLY COST OF OPERATING A SMALL LITHOGRAPHIC PLANT ON A SINGLE SHIFT BASIS—CHART C

Line No.		Camera 24" Mach. Hr.	Stripping B. & W. man Hr.	Opaquing man Hr.	Plate making Mach. Hr.	Two Presses 17½ x 22½" Mach. Hr.	One Press 23 x 36" Mach. Hr.	One Cutter 39" Mach. Hr.	TOTALS
1.	Investment in Cost Center	$11,600.00	$ 500.00	$ 500.00	$ 5,650.00	$33,070.00	$32,025.00	$ 7,075.00	$ 90,420.00
2.	Rate of Depreciation	7½ %	7½ %	7½ %	7½ %	7½ %	7½ %	7½ %	7½ %
3.	Floor Space—Sq. ft.	800	60	60	435	400	400	150	2,305
4.	Total Wattage of Arc Lamps	2,000	—	—	2,000	—	—	—	—
5.	Total Horsepower of Motors	.2	—	—	.5	8	6.5	2	—
	FIXED CHARGES (NON-VARIABLE)								
6.	Depreciation	$ 870.00	$ 37.50	$ 37.50	$ 423.75	$ 2,480.26	$ 2,401.88	$ 530.63	$ 6,781.52
7.	Rent (rate sq. ft., $1.00)	800.00	60.00	60.00	435.00	400.00	400.00	150.00	2,305.00
8.	Fire and Sprinkler Insur. (rate $3.00 per M)	34.80	1.50	1.50	16.95	99.22	96.08	21.23	271.28
	VARIABLE CHARGES								
9.	Payroll (direct labor only)	6,687.72	6,864.00	6,864.00	6,864.00	12,496.64	11,645.40	5,587.40	57,009.16
10.	Indirect Labor, Supervision and Misc. (15%)	1,003.16	1,029.60	1,029.60	1,029.60	1,874.50	1,746.81	838.11	8,551.38
11.	Welfare Benefits ($5.50 per man per week)	286.00	286.00	286.00	286.00	572.00	572.00	286.00	2,574.00
12.	Payroll Taxes—Soc. Sec. and Unemploy. Ins. (4%)	232.13	233.18	233.18	233.18	458.98	453.87	225.52	2,070.04
13.	Workmen's Comp. Ins. (rate $14 per M)	86.84	87.21	87.21	87.21	171.84	168.62	84.53	773.46
14.	Light, Heat and Power (rate $.03 per KWH)	63.64	15.00	15.00	70.26	176.72	143.58	44.18	528.38
15.	Direct Supplies	350.00	135.00	135.00	1,250.00	880.00	660.00	65.00	3,475.00
16.	Repairs to Equipment (2% of Investment)	232.00	10.00	10.00	113.00	661.40	640.50	141.30	1,808.40
17.	Subtotal	10,646.29	8,758.99	8,758.99	10,808.95	20,271.56	18,928.74	7,974.10	86,147.62
18.	General Factory Expenses (10%)	1,064.63	875.90	875.90	1,080.89	2,027.16	1,892.87	797.41	8,614.76
19.	TOTAL MANUFACTURING COSTS	11,710.92	9,634.89	9,634.89	11,889.84	22,298.72	20,821.61	8,771.51	94,762.38
20.	Administrative and selling Overhead (50%)	5,855.46	4,817.44	4,817.44	5,944.92	11,149.36	10,410.81	4,385.76	47,381.19
21.	TOTAL COSTS	$17,566.38	$14,452.33	$14,452.33	$17,834.76	$33,448.08	$31,232.42	$13,157.27	$142,143.57
22.	Manufacturing costs per productive hour, based on an operating activity of:								
	85%—35 Hour Week—1398 Hours	$ 8.38	$ 6.89	$ 6.89	$ 8.50	$ 7.98	$ 14.89	$ 6.27	
	75%—35 Hour Week—1234 Hours	9.49	7.81	7.81	9.64	9.04	16.87	7.11	
	60%—35 Hour Week— 987 Hours	11.87	9.76	9.76	12.05	11.30	21.10	8.89	
23.	All inclusive costs per productive hour, based on an operating activity of:								
	85%—35 Hour Week—1398 Hours	12.57	10.34	10.34	12.76	11.96	22.34	9.41	
	75%—35 Hour Week—1234 Hours	14.24	11.71	11.71	14.45	13.55	25.31	10.66	
	60%—35 Hour Week— 987 Hours	17.80	14.64	14.64	18.07	16.94	31.64	13.33	

(In order to determine hourly cost rates on the two 17½ x 22½" presses, the hours listed in lines 22 and 23 above have been doubled.)

lithographic industry are extremely scarce. In large lithographic cities many workmen receive, not minimum but rather, premium wages.

Lithography is a chemical process. The soundest investment a new plant owner can make is that of securing the most skilled workmen available. In this study, we have listed the minimum wage scale for workers in the New York area, under a labor contract which expires April 30, 1960. The complement of help on a 17 x 22" press is one pressman, on a 22 x 34" press, one pressman and one operator. These minimum wages will be high or low depending on the skilled help available and the wage situation in a particular area. (See Chart B.)

INDIRECT WAGES — Supervision or indirect wages in this study covers one item, the cost of a working foreman at $7200 per year. We have distributed this supervisory payroll over the departments on the basis of 15% of the direct labor payroll.

PAYROLL TAXES — Old Age Benefit and Unemployment Insurance costs vary, depending on the taxes in the state in which a plant is located. Since we have set up our plant in the State of New York, federal and state taxes on this item are 4%. The 4% O.A.B. and Unemployment Insurance cost has been figured on the first $4800 of each employee's wages in the department concerned.

In New York State the rate of 4% for payroll taxes is broken down as follows:

1.20% New York Unemployment Insurance—subject after 3 years to merit rate reductions
2.50% Federal Old Age Benefits
.30% Federal Unemployment Insurance

4.00% Total payroll taxes

For calculating the payroll taxes we have used a rate of 4% per annum on wages up to $4800 per annum with the thought in mind that even though part of the above taxes only apply up to $3000 per annum this small excess will provide a cushion for possible changes in help. You can readily determine your state payroll percentage by reference to your quarterly payroll tax returns.

Health and accident insurance of $5.50 per employee per week for all lithographic workers is provided for in union plants operating in the New York Metropolitan area. No doubt most employers, whether they operate open or union shops, have some such health and welfare insurance cost.

COMPENSATION INSURANCE at the rate of $14 per thousand of mechanical payroll has been distributed over the operating departments in this computation.

DIRECT SUPPLIES in this study include those supplies purchased by a lithographer for general use which are not recovered as such in the estimate when figuring a job for the customer. Some lithographers who sell from a predetermined price list, include in their hourly cost rates such items as paper, plates, film, ink, etc., whereas other lithographers who sell on a job basis throughout the year recover these costs in the estimate set up for each job. (*Continued on next page*)

DIRECT SUPPLIES included in this study are:

Camera Department: Carbon-arcs, chemicals, sponges, and cheese cloth, acids, rubber gloves, and towels.

Stripping Department: Goldenrod masking paper, vinyl, glass, Scotch tape, knives and rubber cement.

Opaquing Department: Opaque, brushes, needles and cotton.

Platemaking Department: Chemicals, developing ink, carbon arcs, gum arabic, cheese cloth, tusche, cotton and brushes.

Presses: Blankets, rollers, molleton, tapes, gum arabic, chemicals, oils, rags, press washup and fountain solutions.

Cutting Department: Cutting sticks, grinding knives, grease and oil.

REPAIRS — Under repairs we have budgeted 2% of capital investment.

GENERAL FACTORY EXPENSE includes such items as spoilage, general supplies, porters, and floor boys, unallocated aisle space, research and development, miscellaneous carpentering, painting, plumbing, electrical work, first aid supplies, etc. These costs have been distributed on the basis of 10% of departmental costs.

ADMINISTRATIVE AND SELLING OVERHEAD includes those items of office, sales and executive expense normal to the operation of every business. Administrative and selling overhead to manufacturing cost varies depending on relative size of the plant and the efficiency under which it is operated. Large plants spread administrative and selling overhead costs over many presses whereas a small plant with one or two presses does not have this advantage and therefore usually has a higher rate of administrative and selling overhead than the large plant. We have set up conservative figures in the administrative and selling expense for this small plant. (See Chart D.)

ADMINISTRATIVE & SELLING EXPENSES

CHART D

This chart shows items of expense common to the operation of any normal business. The arbitrary figures selected as administrative and selling expenses below are considered conservative.

ADMINISTRATIVE EXPENSE:	
Auditing	$ 225.
Auto supplies—general office	575.
Bad debts	361.
Collection expense	225.
Contributions	400.
Convention expense	400.
Depreciation—office equipment	90.
Dues to trade associations	350.
Insurance other than factory	100.
Legal expense	225.
Miscellaneous office expense	650.
Office supplies	625.
Postage	600.
Rent office (1000 sq. ft.)	1,000.
Salaries—executive	12,000.
Salaries of office help, estimator, order writer, stenographer	11,700.
Taxes—corporate	60.
Taxes—payroll	900.
Telephone and telegrams	575.
Traveling expense	525.
Total Administrative Expense	$31,586.
SELLING EXPENSE:	
Advertising	600.
Auto and expenses—salesmen	425.
Commissions and salaries—salesmen	12,000.
Convention expense—salesmen	290.
Insurance	165.
Rent sales office—500 sq. ft.	500.
Taxes—payroll	615.
Traveling expenses	1,200.
Total Selling Expenses	$15,795.
Total Administrative and Selling Expenses	47,381.

TOTAL MANUFACTURING COST in the plant we have set up is $94,762.38 while the total administrative and selling overhead cost is $47,381.19. This gives us the following ratio for distributing administrative and selling overhead cost to various manufacturing cost centers:

$$\frac{\text{Adm. \& Sell. O. Cost}}{\text{Manufacturing Cost}} = \frac{\$47{,}381.19}{\$94{,}762.38} = 50\%$$

Up to this point in this study, we have gathered the items necessary to set up a budget showing the cost of operating each department for a one year period. We can now secure an approximation of both our manufacturing and all-inclusive costs over any given rate of productivity.

Productivity for a camera department where a plant enjoys long runs can be low. If the runs are to be short, obviously much more camera work will be required and productivity will be high.

The only way to determine actual productive time in a department or on a job is to install a cost system and then record both productive and nonproductive time, job by job, day by day, over a period of time and thereby build up productive standards for each department in your plant.

In this study we have budgeted both manufacturing and all-inclusive costs over 60%, 75% and 85% rates of productivity. The productive hours are based upon the data as computed in Chart F.

It is not difficult to budget departmental costs in a specific plant. A good bookkeeper can do it. No one can afford to operate a lithographic plant without actually knowing what it costs to operate the equipment in that specific plant and translating it into hourly rates.

MANUFACTURING OVERHEAD—CHART E

This chart illustrates one method for allocating the costs of manufacture.

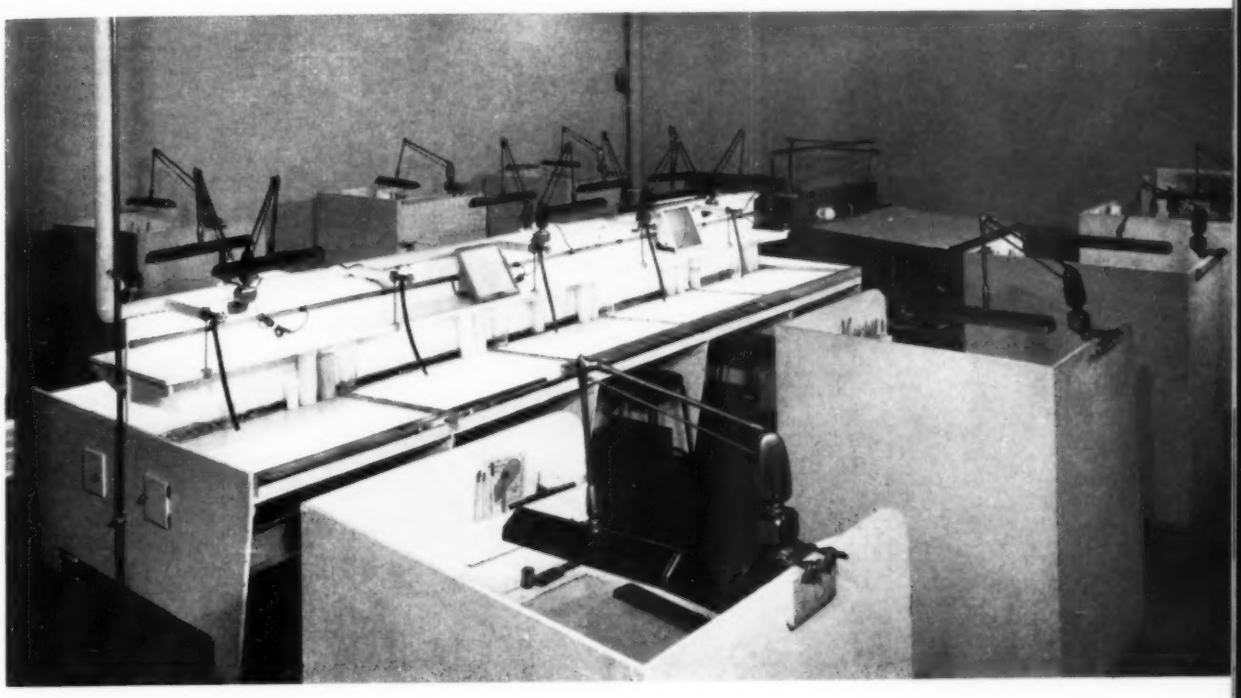
Cost Center	Department Mfg. Exp	Per Cent	Applied To Cost Center
Camera Dept.	$11,710.92	12.36	$ 5,855.46
Stripping Dept.	9,634.89	10.17	4,817.44
Opaquing Dept.	9,634.89	10.17	4,817.44
Platemaking Dept.	11,889.84	12.54	5,944.92
Two 17 x 22" Presses	22,298.72	23.53	11,149.36
One 22 x 34" Press	20,821.61	21.97	10,410.81
Cutting Dept.	8,771.51	9.26	4,385.76
	$94,762.38	100.00	$47,381.19

PRODUCTIVE HOURS—CHART F

This chart shows how in this study actual hours have been considered.

			Hours
35 Hours x 52 weeks			1820
Less: 3 Weeks Paid Vacation	105		
10 Paid Holidays not Worked	70		175
Net Hours			1645
Number of Productive Hours	85%	of 1645	or 1398
" " " "	75%	" "	" 1234
" " " "	60%	" "	" 987

● ***Ingenuity of Cleveland platemaker, shown by original 10 station dot etching table below, is evident in $1/4 million plant.***



QUALITY Emphasized in Litho Plate Production

By JOHN D. HEMMLER, *Assistant Editor*

APPEARANCE of the work which it produces and the building where it is produced are among the standout features of Photo Litho Plate Co., Cleveland lithographic platemaking firm. Operated by Henry Huefner, sr., president, and his son, Henry, jr., treasurer, PLP's emphasis is upon quality, attested to by the award winning printing for which they have made plates.

HUEFNER, SR.

The $1/4 million plant is located 12 miles from the heart of Cleveland in a quiet suburban area where problems such as parking and future expansion are eliminated. Forced to relocate because of a change of building ownership at its previous site in downtown Cleveland, the new plant was erected in three months.

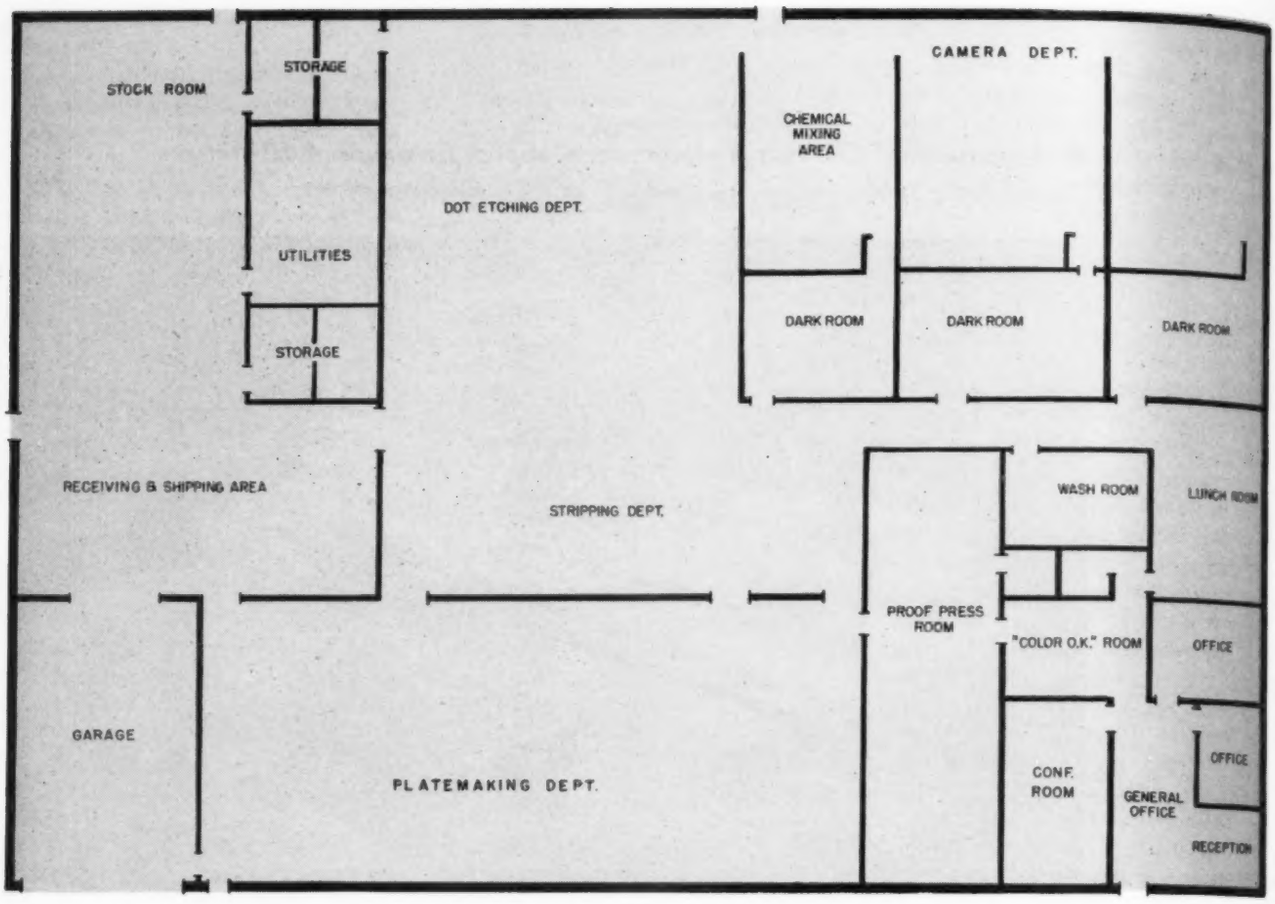
The plant layout was conceived by Olin Freedman, Graphic Arts consultant of Chicago. Construction of the building was started Dec. 15, 1957, and was finished in March, 1958. By April 1, 1958 the move was completed.

The building is completely air conditioned. Temperature in the work areas is maintained at 76 deg. F.; relative humidity at 50%. Air conditioning equipment consists of four separate units which can be regulated independently of each other. Thus, the plant is divided into four zones, and the temperature, if desired, can be adjusted to suit operations within each zone.

HUEFNER, JR.

Humidity control is independent of the air conditioning equipment. A number of humidity units are mounted at ceiling height and can be adjusted individually. This provides flexibility in a plant of this type since control can be limited to a small area, such as a darkroom, or in the plate developing area.

In connection with the humidifiers, a problem arose which was not foreseen. Because the water in the



Floor plan showing departmental arrangement of the Photo Litho Plate Co., Cleveland. Layout of this new plant was prepared by Olin Freedman, Chicago Graphic Arts consultant.

Cleveland area contains mineral deposits, the fine spray blown into the atmosphere by these units would evaporate leaving a hard coating of the impurities on equipment and walls. The problem was overcome by the installation of a demineralizer which purifies the water prior to entering the spray units.

The building was designed with cavity-type walls. The exterior, of brick, was constructed with a 2 in. air space between it and the concrete block wall on the inside. The air space not only insulates, but also prevents the seepage of moisture. Moisture will condense in the air space and run down the exterior of the concrete wall into troughs which carry it away. This permits the inside plant wall to maintain a constant temperature and remain dry in all types of weather.

Exterior view of the modern plant of PLP. Located in suburban Cleveland, parking presents few problems. Walls are of the cavity-type construction while the roof is poured gypsum.

Floors in the production areas are concrete with steel shavings put into the finish coat to prevent dusting and wearing. The roof is poured gypsum which provides economies in two areas. It affords savings in maintenance costs of painting which are incurred in the usual steel deck type of construction and also provides excellent insulation.

The 44,000 sq. ft. of land on which the plant is built provides adequate parking facilities for the employees and customers and supplies room for effective landscaping. Floor area of the plant is 13,400 sq. ft. One interesting feature of this building is the knock-out wall at the rear of the building which provides for future expansion and additions. Darkrooms are painted with a plasticized paint which is said to be impervious to chemicals.

A 48-in. Consolidated camera needed to replace an obsolete camera for fine color work was added during the move. At the present time PLP has two other cameras in operation: a 20 in. Klimsch vertical which is used for black and white work, and a 36 in. Koppe West camera.

All equipment is geared to handle large size plates, the maximum being 54 in. by 77 in. Two photocomposing machines for step and repeat work, two whirlers and a down draft developing table comprise the balance of the plate equipment. Proofing is done on two lithographic proof presses.

Production Areas of Photo Litho Plate Co., Cleveland

1—One of the three darkrooms. Camera is a 20 in. Klimsch vertical auto focus. Dexion adjustable steel angle iron is used in construction of tables.

2—Layout and stripping areas indicate abundant space in work areas. Partition separates stripping department from main exposure areas.

3—Plate exposure and coating department. Note use of Dexion angle iron material in guard around photocomposing motors and in the table at center.

4—Roll-up and final inspection take place on press shown at right rear.

Another interesting feature in equipment which is unique to PLP is a table containing ten dot etching stations — combined into one complete unit. Each station is supplied with water from a centrally located pipe, a light table, a transparency viewer, and all equipment necessary to perform dot etching operations. The ten stations are arranged five on each side so that the table is actually a double bank. This provides for economies in space as well as installation. The dot etching unit was designed by employees and cost PLP approx. $1500.

The company also has had a gravity flow feed for the plate sensitizers installed as a field test. This consists of inverted plastic bottles which are mounted on the wall with a rubber hose running to the plate whirlers. In this way the necessity of measuring and the troublesome air bubbles that usually result from the pouring from bottle to beaker are eliminated.

Extensive use is made of adjustable steel angle irons. These are used by PLP in the making of tables, braces, storage racks, etc. In short, use is limited only by the ingenuity of the person utilizing these slotted steel products.

The company is prepared to supply almost any type of litho plate that a customer desires since experimentation of new plates is carried on within the plant in an effort to become familiar with them. Because of the fine color work produced, 99% of its business is made up of aluminum deep-etch plates. The remaining 1% are zinc surface plates. Minimum size of plates handled is 17 in. by 22 in. Huefner, jr., reports successful results from

(*Continued on Page 53*)

● ***No promises, no invitation, not a typical feminine field—yet many women select printing as their career.***

WHAT IS THERE THAT ATTRACTS

Women in the Gra

AMONG the top semi-finalists in the 1959-60 competition for scholarships from the National Scholarship Trust Fund of the Education Council of the Graphic Arts Industry were two girls, and one girl was offered a scholarship. The scholarships are granted for studies in the field of printing plant management, engineering and teaching.

The fact that young women are seeking a career in the Graphic Arts industry prompted the question, "What is there about the Graphic Arts industry to attract women?" The answer comes from Florence B. Shera, business manager, *Printing News*, New York, and a past president, N.Y. Club of Printing Women:

"What attracts women to printing? It's not one of the typically feminine fields, like teaching, or fashion, or interior decorating, or nursing. And printing doesn't open its arms to women or invite them into its portals. Once in the field, a woman finds no advantage as a woman, nor ease of advancement, nor high wages, nor any special recognition.

"Yet here we are—women in printing. Why did we come? Perhaps because there's an excitement in printing that demands one's final ounce of skill, the nth degree of attention, the keenest thought and hair's-breadth alertness. And even as you pour out your ability, your training, your common sense and your ingenuity, stretching to the breaking point of effort, there is no assurance of the result; no promise that this time you're right because you were the last time; no guarantee that if you knew what you were doing yesterday you'll be equally adept today.

"The return is indefinable. It lies partly in the fact that your best efforts are never finally enough, but must always be improved and developed; that the printing with which you are involved in one form or another has a thousand shapes and purposes and meanings. There is no sameness, no smug conclusion to one's requirements.

"This is a moving, changing, challenging, fascinating field, and the women who seek it must have courage, persistence, appreciation of craftsmanship and excitement in their souls," concluded Miss Shera.

Names of women in printing appear in the earliest records of the history of printing. The earliest instance of text printing upon paper is supposed to have been instigated by the Empress Shotoku of Japan in A. D. 770. The first printing press set up in Spain was established by Queen Isabella. Madame Pompadour was a printing enthusiast, and she toyed with a small press at Versailles on which she reproduced papers written by Voltaire. Queen Victoria established a private press for women only.

First Woman Printer

As early as 1636, we hear of the first woman printer in Maryland, Dinah Nuthead. She is cited as the first woman in America to be in complete charge of a printing office. The first printing establishment in America was set up in Cambridge, Mass., in 1639, by another woman, Elizabeth Glover.

From 1704 to 1788, there were 78 newspapers in the Colonies—16 of which were issued by women. Benjamin Franklin's sister-in-law, Ann Smith Franklin, Newport, R. I., successfully continued her husband James' printing business for 30 years after his death in 1735. Cornelia Smith, continued the bookselling and printing business of her husband Andrew Bradford after his death. She also published the *American Weekly Mercury*.

Mary Crouch, Charleston, S. C., Penelope Russel, Berlin, N. H., Anna Zenger, New York City, and Ann Catherine Green, Cambridge, Mass., are among the score of women whose names are chronicled in the history of the printing industry in 18th Century America and Europe.

In the 19th Century, women were more closely associated with the composing room. In the 1870s, Callie White was elected by the Typographical Union, Jackson, Miss., to represent it at the Intl. Union Convention. After 1886, women were frequently employed to work on the newly invented Linotype machine. E. Giegengack, former U. S. Public Printer and manager of the recent Seventh Educational Graphic Arts Exposition, reports that his mother was a compositor. His assistant, Miss Joe Coffin, was a Linotype and Monotype operator.

In the 20th Century, the emancipation of women showed its effect on their status of printing. Earlier, women had been for the most part *practical printers*. The 20th Cen-

Ann Jeffreys is in charge of industrial relations and personnel for the National Publishing Co., Washington, D. C.

(The author is indebted to the Club of Printing Women of New York for much of the source material which was taken with permission from its copyrighted book: Antique, Modern and Swash, *edited by C. S. Thayer.)*

By SAMUEL M. BURT, *Managing Director*
Education Council of Graphic Arts Industry

Graphic Arts Industry

Joan J. De Mario production manager, Guinn Company, New York, checks press proofs with Robert M. Guinn, president.

tury saw them develop as executives, creative artists, estimators, advertising managers, personnel managers, purchasing agents, type designers, saleswomen, accountants, shop supervisors and plant owners. Today women are engaged in every facet of the Graphic Arts industries.

More Women Employees

That more women will be so engaged is pointed up by a recent report from the U. S. Dept. of Labor which, in projecting manpower needs of our country, states that by 1965 women will account for one-half the total number of new employees coming into the labor market. Thus, employers in the Graphic Arts industry must, of a necessity, think more and more of the possibilities of utilizing women in their offices and plants.

It is a boast of the Club of Printing Women of New York that from their membership they could assemble a complete staff to manage and operate a printing plant, including: an office with secretarial and accounting staffs; a sales division; an art and copy and production unit; and estimators and purchasing personnel to buy paper, ink, etc. Also a shop complete with supervisor, plant superintendent, Linotypists, hand typesetters, proofreaders, stonehands and presswomen. Control and follow-up of production would be handled by an experienced staff from the time the job was received until delivered to the customer.

In 1957, the first woman to receive a B.S. degree in Printing Management, Elain Harris, was graduated from Carnegie Institute of Technology's School of Printing Management. She maintained the highest rating in the class throughout her schooling, and upon graduation received the Robert H. Caffee Alumni Award. Now, Mrs. Roger Hansen, she is in production management with a large Chicago printing firm.

Prior to entering Carnegie Institute of Technology, Mrs. Hansen had received her degree of Master of Arts in English Language and Literature in 1954 from the University of Chicago, and had worked for several years, at the University of Chicago Press. In explaining her choice of the printing industry as he career, she said that after graduation she had a choice of either teaching or remaining at the University Press. She chose the latter, feeling it was more of a challenge.

It was while working in the production end of the business that she decided the printing business was the career for her. From this decision, it was simply a matter of learning the business, and she felt that Carnegie Tech offered her the chance to learn the fundamentals and give her the degree she would need to compete evenly with anyone in this highly competitive business.

Hold Executive Positions

Another woman, Ann Jeffreys, is director of industrial relations and personnel, National Publishing Co.,

(*Continued on Page 69*)

KAUFMANN KORNBLAU

Two Women in Printing—Ranking among the top printing sale executives in New York is Madelin M. Kaufmann, partner, The Kaufmann Company. Miss Kaufmann received her B.S. in Business Administration from New York University, and a certificate of appreciation from the Education Council of the Graphic Arts Industry for her participation in the apprentice training program of New York Employing Printers Assoc. She is president, Club of Printing Women of New York, a member of the board of directors, Associated Printing Salesmen, and a member of the board of directors, Master Printers Section, NYEPA.

Also well known in the field is Lois B. Kornblau, manager of employment and aptitude testing, Printing Industries of Philadelphia. Mrs. Kornblau received both her B.A. and M.A. degrees from Temple University, Philadelphia, with majors in the field of psychology. In her present position she is responsible for interviewing, screening and testing job applicants for positions in printing plants which are members of Printing Industries of Philadelphia.

She is a member of the Women's Personnel Group of Philadelphia, Intl. Assoc. of Personnel Women, and the American Psychological Assoc. She has published several articles and participated as a panel member in two conferences for personnel directors by the Education Council of the Graphic Arts Industry.

Limitations of Ink in

ROP COLOR

. . . what newspapers can do to achieve better quality with process color inks.

By AL YELMGREN, ***ANPA Research Institute, Easton, Pa.****

PROCESS inks are based on the use of three primary pigments —magenta, cyan, and yellow—so that the proper combination of these inks will reproduce, within certain limits, all of the other colors as well as black.

What may seem relatively simple in theory is not easily obtainable in practice. It is impossible to obtain a set of pigments that will fulfill the theoretical requirements. Any given color exists in a variety of shades, the use of which will cause the color balance to shift in one direction or another. As a result, the present ROP process inks represent a compromise between the use of one pigment as compared to another not overlooking the fact that the cost factor has prejudiced the choice. This also makes it understandable why there can be more than one set of process inks each giving slightly different results with varying claims of superiority.

As long as you are merely interested in producing various coloring effects without too much concern for a satisfactory reproduction of the original, process inks may be chosen indiscriminately. When, however, the success or failure of a costly advertising campaign depends on the impact of a correct color reproduction, the choice of inks will then warrant serious consideration.

There is some confusion as to what a balanced set of process inks will or will not do, as well as a differentiation between spot color and color halftone reproduction.

Spot color is the laying down of a solid ink film from a solid plate area. Even though one can reproduce this same color by the use of halftones, the color will be weaker and less bright simply because one is printing a tint and not a solid. Thus, it would seem logical that if there is an area in an ad that is predominately one color, for example a label on a bottle, a better effect could be obtained by matching the color and printing it as a spot color since this is the way the label was printed originally.

This brings another problem to mind. The original may have been printed with a highly pigmented offset ink on high-white gummed stock followed up with overprint varnish. Now this is to be duplicated on a poor grade of off-white paper, using soupy inks and, of course, no overprint varnish. Obviously the original cannot be duplicated in the absolute sense of the word, but can only be simulated; and by the proper choice of contrasts make the viewer think he is seeing the original. However, this is a problem requiring the skills of the entire production department and cannot be adequately solved by merely a different choice of inks.

A problem related to this would be in the case where an ad is run from submitted mats. Plates are made, and even though one feels a good set of inks is being used, the result is far from satisfactory. Assuming one has received a proof and the indications are that the original plates from which the mats were made, are quite good, then one has a right to question what type of inks were meant to be used with the plates.

The chief function of a balanced set of process inks is to reproduce the original color values with a fair degree of fidelity provided that the entire reproduction process from camera to plates has ben geared to meet the requirements of the inks. This is why it is important for the newspapers to adhere to a basic set of inks, standardizing their reproduction methods to obtain the maximum from these inks rather than switching inks every time a different set of plates is made. In other words, it is easier to change the camera exposure than it is to change inks.

With this consideration of the principles on which process colors have been established and the need of conforming to the requirements of primary colors as closely as it is practical to do so, there is the additional variable of transparency of the pigment that may have some influence on the results.

Many of us have the general impression that an opaque ink is one that has a strong, solid covering power and that a transparent ink is one that is weak or thin because of a lack in covering power.

Because of this, there is some confusion in distinguishing between the basic color or hue of an ink and its degree of transparency. The color of a pigment is due to its molecular structure, whereas variation in transparency is due to the manner in which the unabsorbed light is reflected and refracted. More often than not a change in results that has been attributed to differences in transparency was due to the change in hue of the pigment.

What Makes the Difference?

The difference between an opaque and transparent pigment is determined by the amount of light penetration that the pigment will permit. An opaque pigment reflects light primarily from its surface thereby obscuring the under surface. The transparent pigment will permit the light to penetrate through it to reflect back from the under surface. As a consequence we see through the pigment and conclude it has poor covering power.

*From an address delivered at the 21st Annual New England Newspaper Mechanical Conference held in Boston, Oct. 17-18.

The terms opaque and transparent are relative and when we speak of inks being either opaque or transparent it is of degree rather than kind. Thus, even though the ROP process inks are essentially transparent, it is conventional to think of the yellow to be more opaque than the magenta which in turn is more opaque than the cyan. The significance of this is that the first ink down should be as opaque as possible in order to completely cover the paper and minimize any undesirable effects that the color of the paper might contribute. The succeeding inks are then made more transparent to permit the under colors to show through to produce the final color we see. This is roughly analogous to permitting white light to shine through a yellow filter, and this yellow light, in turn, goes through a blue filter to emerge as a green light.

Order of Ink Laydown

The question might be asked if this difference in transparency between inks has sufficient influence on the quality of the reproduction so as to be a factor in determining a choice of inks and their order of laydown.

In an attempt to gain some indication of the significance of these differences of transparency, a set of proofs was made on a proof press using solid magnesium plates. The three ANPA process inks were printed in such an order so that there was an overlap of each pair of inks, i.e., yellow over magenta, magenta over yellow, yellow over cyan, cyan over yellow, etc. Also, the proofs were made on five different stocks—two newsprint, a mimeo white, a coated white and a plastic film.

Examination of these proofs showed that for all practical purposes, the order of overlay did not influence the result when printing on newsprint. It was not until a white stock was used, particularly the coated stock, that some differences became noticeable.

It might be well to consider first the factors involved in overprinting two different inks. Before the use of the wet trapping technique, it was customary to allow the first down ink to partially dry before overprint-

(*Continued on Page* 64)

Photoengravers Standardize On Color Control Bars

A MAJOR step forward was taken last month with the adoption of standardized color control bars by the photoengraving industry. This action was recommended by F. E. Church, Time, Inc. at the 63rd convention of the American Photoengravers Assoc. held in Dallas, and was immediately adopted by the organization.

Recommendations for the standardization were made by a joint committee composed of the American Assoc. of Advertising Agencies, the Magazine Publishers Assoc., and Printing Industry of America. Because the use of color bars on progressive proofs are intended to inform those concerned with the amount of ink and the hues used, the committee felt that the innumerable varieties now in use defeated the primary purpose.

A sub-committee of the AAAA-MPA was appointed to suggest a standard bar which would be most acceptable from a functional standpoint. Printers and engravers in 10 cities were consulted for their opinions in this area and subsequent meetings were held in conjunction with the Photoengraving Standards Committee of the PIA. Representatives of the American Photoengraver's Mechanical Committee were also invited to take an active part in the program.

Color bars in use were reviewed and new types were designed and proofed. It should be stated that the design of the bar for functional use received the major amount of attention. The area of coverage, for solids, the percentage of screen ruling, and the size and placement of trapping areas were the items most concentrated upon.

Features of New Color Bar

As a result of the ensuing discussions the following conclusions which concern the effectiveness of a color bar were arrived at:

(1) It should be possible to determine the quantity of ink on proofs by inspection of the color bars.

(2) The design of a color bar should provide for certain trapping characteristics to show the ink hue, as well as to provide an additional check on the quantity of ink.

(3) The center portion for each color bar should be a solid ¼ in. deep and a 75% screen ¼ in. deep —7½ in. wide and 4½ in. wide, respectively, for the two sizes to be recommended.

(4) There should be ¼ in. white space between the center portion of the bars.

(5) Two trapping areas at each end should be identical and should consist of four combinations of two color solid and 75% density trapping—yellow-blue; yellow-red; red-blue; and blue-black, each trapping area to be ¾ in. wide.

(6) Each bar should be identified in reverse with the symbols Y, R, B, and K, and screen rulings should also be shown.

(7) It is suggested that the photoengraver's identification or trademark be placed below the black bar in any form desired, but should not become an integral part of the bar itself.

(8) It is recommended that the standard bars have common register marks and be equipped with lockon screws.

(9) Two sizes of bars should become standard: 10½ in. wide, over-all, and 7½ in. wide, over-all.

(10) The design of the four color bars should be such that they can be used for four color wet or for two and two color proofing, black and one color proofing.

Advantages to the Engraver

Some of the benefits in a standard color bar which are expected to be gained by the photoengraver are: reduced costs, time saved in lockup and positioning, and the ability to use the same bars for all proofs. The standardization will also result in a reduction in the number of second, third, and additional proofs because the bars will help to control the amount of ink used from proof to proof.

To insure standardization, master

(*Continued on Page* 87)

a major reason why 3 out of 4 newspapers are printed on GOSS

ENGINEERING EXCELLENCE

Engineering excellence is the heart of Goss leadership—with technical advancements that are universally known. Tension Plate Lockup, continuous ink feed, color flexibility and finger-tip Colortrol are just a few Goss "firsts" that have made newspaper history. Goss' years-ahead thinking is based on widest experience, sound planning and perfecting. In fact, 1 out of every 7 Goss men is a qualified engineer.

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Specialists in newspaper, magazine and roto presses

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The leader in graphic arts . . . engineering, service and manufacturing . . . industry-wide and world-wide

Chemco Pre-Mixed Developer In Liquid Concentrate Form

Chemco Photoproducts Co. introduced a two-part formaldehyde developer in concentrate liquid form at the American Photoengravers Convention in Dallas last month. Named Powerlith Developer Concentrate, the developer is pre-mixed to provide exact bath formulation.

The concentrate contains 50% of the water needed for the bath and is mixed one part A and one part B developer to two parts water. Thus mixing of powders is eliminated. One major advantage is said to lie in the elimination of aerial oxidation, for the concentrate need never be exposed to air except in the bath.

The manufacturer recommends that the developer be used as a replenisher to bring a used bath back to full strength. Reportedly, this can be repeated a second time provided the bath is not too far spent. It is also claimed that the developer eliminates the preparation of an entirely new end-of-day bath often needed to process a small amount of work.

Both the A and B concentrates are supplied in 5 gal. quantities packaged in unbreakable polyethylene Cubitainers. The contents of one A and one B package will provide 20 gals. of solution. The Cubitainer is sealed in a cardboard carton, die cut to provide an opening for access to the plastic bag without unsealing the carton.

Chemco's pre-mixed Powerlith Developer Concentrate, A and B, and Power-fix, F, are packaged in 5 gal. polyethylene Cubitainers. Desired amounts of each may be drawn off with a probe and hose; empty cartons may be discarded.

Films For Contact Printing, Lateral Reverse Exposure

Two photographic films—one designed especially for contact printing work and the other for lateral reversal exposures—were introduced by the Photo Products Dept., E. I. DuPont de Nemours & Co., at the American Photoengravers Assoc. convention in Dallas, last month.

Named Cronar Ortho M and Cronar Clear Back Ortho, the films are on a 0.004 in. polyester base. Ortho M is described as having a high contrast, wide latitude orthochromatic emulsion. It features an emulsion and backing surface treatment that is said to minimize contact printing problems caused by Newton's rings and trapped air bells; reduce vacuum drawdown time by three; and prevent film from sticking together.

Recommended uses for Ortho M are: making large-size contacts; exposing presensitized lithographic plates; exposing smooth-surfaced photoengraving plates and printing critical contact halftones. Ortho M is also said to have advantages in making flat tints by contact, making highlight masks, in phototypography, and in exposing Dycril photopolymer printing plates.

Clear Back Ortho film is an orthochromatic film with a low-density, antihalation coating designed to permit exposure through the film base, providing lateral reversal of image directly in the camera. It is said to have a special surface treatment which eliminates common contact problems and prevents film from sticking together. When exposed on emulsion side, it has the same speed as standard high contrast film. When exposed through the base, it requires an exposure increase of 10-30%.

According to the manufacturer, Clear Back Ortho also offers these advantages: conforms to all flat, curved and wrap-around plates; makes first-step camera negatives for deep-etch process; is free from static buildup; can be easily spotted or retouched; and can be used in phototypesetting machines and in making camera negatives for exposure on Dycril photopolymer printing plates. Both films are available in standard sheet sizes and are sensitive to the blue, green and yellow regions of the spectrum.

Help Fight TB

Use Christmas Seals

Larger Dycril Plates Available in mid-1960

E. I. du Pont de Nemours & Co., Inc., by the middle of 1960 expects to market a 28 in. by 30 in. Dycril plate. This was announced in a progress report given at the Graphic Arts Exposition held on Sept. 6-12. These plates are to be approx. 0.030 in. thick with about 0.015 in. relief. The plates are in anticipation of the new wrap-around presses recently announced and the company expects to have plate sizes up to 30 in. by 76 in. on the market by the end of 1961.

Four additional outlets of Dycril plates have been selected by Du Pont. These are: Polyplate Corporation, a division of Quality Photo-Engraving Co.; Flower Company, an affiliate of Flower Steel Electrotype Co.; Horan Engraving Co., all of New York City; and Progressive Composition Co. of Philadelphia. The three original outlets are: Typo Photo Plate, Inc., a subsidiary of Typographic Service, Inc.; Beck Engraving Co., both of Philadelphia; and Industrial Engraving Co. of Easton, Pa. At present, only Industrial Engraving Co. is producing curved plates.

Other news from Du Pont indicates that preliminary plans are under way for a commercial plant which will manufacture the blank plates. Present production is coming from a small manufacturing facility at the Du Pont Photo Products plant at Parlin, N. J. ·

Advocates Printing Color on Color

Are you tired of printing black on white? Have you ever thought of printing purple on yellow or some other combination . . . or perhaps printing four color process on a tinted stock? This may well become commonplace if the consumer will accept this new concept.

The National Aniline Div., Allied Chemical Corp., a producer of dyes for paper manufacturers, has published a booklet in which samples of four color process are printed on color as well as white stock. Also included are samples of type printed on paper of various colors. The purpose of the booklet is to suggest that color in paper can attract more friendly attention and minimize the effort necessary to read the message.

According to the author, Faber Birren, the major reason for not adopting such uses of color papers is convention. He believes the use of new and startling ideas frighten some people.

Birren discusses the psychological use of color, readability, eye fatigue, etc., as advantages for the departure from black and white. Such high contrasts as is given by black and white are fatiguing to the eyes over a long period than are lower contrasts. According to Birren, a brightness ratio of 8 to 1 is found to be satisfactory for legibility, while black on white has a ratio of 16 to 1. Acknowledging that color stock will never replace black and white, Birren nevertheless takes the view that there is a definite place for printing color on tinted paper.

Copies of this booklet may be obtained by writing to: Paul Oertel, publicity manager, National Aniline Div., Allied Chemical Corp., 40 Rector St., New York.

Press Washup Attachment Shown in N.Y. by DIPCO

An automatic printing press washup attachment was shown to printers for the first time at the Graphic Arts Exposition by Dayton Industrial Products Co., Div. Dayton Rubber Co. The attachment consists of individual 2 in. blades operating independently across the full length of the roller.

Each blade is said to seat itself with the right amount of tension, and flex and adjust automatically to compensate for high or low spots in the rollers. Two types of blades are used for the attachment. One type, for use on hard surface steel rollers, is manufactured of 0.004 in. thick chrome spring steel, while another type, for use on presses having soft steel surface rollers, are ground out of 0.005 in thick nylon.

According to manufacturer, the attachment can be used with any type washup solvent, and can be used to wash up a press from six to 12 times before cleaning.

Pre-Curved Printing Plate Development

A recent development for producing original letterpress engravings on pre-curved surfaces for use on rotary presses has been announced by Regan Industries, Inc. The process is designed for making line, halftone and combination plates.

Three pieces of equipment—a rotary coating machine, a rotary vacuum printer and a rotary powderless etching machine—have been specially developed for use with the process. According to the manufacturer, these machines can be adapted to any standard engraving material. Any size or diameter of pre-curved plate from 1/32 to ¼ in. may be handled.

The etcher and coater, in addition to electronic controls, are equipped with heating, refrigeration and air conditioning features. It is claimed by the manufacturer that if settings are proper, both pieces of equipment will automatically complete the full cycle of the process. Pre-curved plates can be produced with this equipment in about the same time as that required for standard flat engravings, it was stated in the announcement.

At least one installation has already been made under a standard licensing agreement which is to be made available to other companies interested in this process.

This specially developed equipment by Regan Industries is designed for making original letterpress engravings on pre-curved surfaces. At left is a rotary coating machine; center is the rotary vacuum printer; at right is the rotary powderless etching machine.

American Photoengravers convention in Dallas talks of more research activity; elects E. Bartlett Brooks to presidency.

THE photoengraving industry showed vigorous signs last month on many fronts of revitalizing its processes and preparing for future letterpress printing needs.

Starting with a prediction that the "coming revolution in letterpress" will be all-out cooperation between engravers and printers, the American Photoengravers Assoc. moved along to swiftly adopt a standard color control bar, heard a top union official pledge substantial support to a research program, and then closely examined the new wrap-around printing process with an eye toward preparing these plates.

It was the 63rd convention of the APEA and 800 were on hand at the Statler Hilton Hotel in Dallas for a well coordinated three day program. A highlight was the election of E. Bartlett Brooks to the presidency of the association. He is president of Wayne Colorplate Co. of Ohio, Dayton, O., and succeeded R. C. Walker who completed a four year term. Walker, who presided at the Dallas sessions, is president of Southwestern Engraving Co., Tulsa, Okla.

Another feature was an exhibit of photoengraving equipment and supplies in which some 40 companies displayed machines and products of interest to this letterpress platemaking field. Programming of the convention was planned by Frank J. Schreiber, APEA executive secretary; local arrangements were handled by a committee under the chairmanship of Homer L. Green who is president, Wilson Engraving Co., Dallas.

Other new officers elected by the convention were: Harry E. Collins, chairman of board, Collins, Miller, Hutchings, Inc., Chicago, first vice president; S. Herbert Hitch, president, Charlotte Engraving Co., Charlotte, N. C., second vice president; and W. K. James, president, Philadelphia-Weeks Engraving Co., Philadelphia, secretary-treasurer.

Next year's convention will be held in Buffalo, N. Y., on Oct. 9-12 at the Hotel Statler.

Photoengravers Study

NEEDS OF LETTERPRESS

Wrap-around printing also examined

By EDWARD H. OWEN, *Editor*

Bets Heavily on Letterpress

The forecaster of the all-out engraver-printer cooperation was Joseph Chanko, general manager, Conde' Nast Press, Greenwich, Conn. He said the magazine printing industry is betting heavily on letterpress, but warned that a change to another medium could take place ". . . if we price ourselves out of the market." His cooperation statement was attributed to supplying the right kind of engravings to printers which will spur them to greater efforts at quality with no increase in cost.

He thought printers should be sympathetic to engravers' problems. Too frequently, he said, the engraver is not given enough time to do his work properly.

An advocate of inspection of material before printing, Chanko explained that every engraving received in the Conde' Nast plant is inspected for quality against standard specifications and for fidelity of color matching against a color control sheet previously supplied to the engraver. If a minor deviation from specifications is found, it is noted on an internal report as a guide in printing. If, however, the deviation is sufficiently important to warrant a report, it is sent by the Engraving Inspection Dept. to the engraver and/or the publisher's representative, who may review the problem to what extent the deviation will affect the quality of the reproduction.

According to Chanko, supervision is a very important ingredient in quality. The quality control system followed in his company begins with the pressman who looks at sheets constantly throughout the run. Next, the foreman of the department periodically examines a sheet at every press and finally the quality critic. The latter is the final judge of quality and has the authority to stop a press to make any improvements required in order to achieve quality.

Wants Better Color Matches

The speaker impressed upon the photoengravers how important it is to match color control sheets which are supplied when proofing color plates. It was his opinion that a big step toward uniform color proofing will be achieved by use of a standard color control bar. The next step, he added, is to agree upon the four

practicable colors which will produce the most faithful proof to match original copy and give the best printed reproductions.

Other important areas for improvement mentioned by Chanko included: standard proofheads, trapping problems in dense engravings, standard lighting for viewing under the same conditions, engraving specifications, and information about photoengraving problems.

Finally, he called for the creation of five regional committees for establishing closer communications between engraver and printer. He suggested the regions could be: Northeast, Southeast, Middle West, Southwest, and Far West. A twice a year meeting of these committees, he thought, would be mutually beneficial and could be ". . . a tremendous force for quality and improved productivity."

The photoengravers next heard arguments in favor of a standardization in color control bars from F. E. Church of Time, Inc. In his capacity as chairman and on behalf of a joint Magazine Publishers Assoc.-American Assoc. of Advertising Agencies committee, Church explained the drawbacks in the variety of color control bars now in use and then presented the advantages of a new bar (See page 41). Later, the convention voted unanimously to adopt the standard bar as advocated by the MPA-AAAA group.

Printers Tell of Faults in Color Process Material

Prior to this action, Church revealed the early results of a survey of 33 printers who do the printing for 93 publishing firms of the Magazine Publishers Assoc., who in turn publish a total of 246 magazines.

New officers and executive committee of American Photoengravers Assoc. Seated, left to right: D. H. Murnik, Oakland, Calif.; Harry E. Collins, Chicago, first vice president; E. Bartlett Brooks, Dayton, O., president; S. Herbert Hitch, Charlotte, N. C., second vice president; W. K. James, Philadelphia, secretary-treasurer; Robert S. Swan, Bridgeport, Conn. Standing: Fred J. Gaertner, Minneapolis; Richard W. Watkins, St. Louis; Louis D. Barbieri, New York City; R. C. Walker, Tulsa, Okla., past president; G. P. Klauminzer, Cleveland; Robert M. Birdseye, Detroit.

The survey was intended to check the suitability of two color and four color process material currently being supplied.

Shoulders and over-etching topped the list of faults found in original engravings by the printing companies. The photoengravers had a good record in respect to register of engravings. Also, it was established that incorrect screens were used less than 1% of the time; poor assembly occurred 4.1% of the time; and backs of original engravings were scarred or etched 5% of the time.

Excessive makeready on progressive proofs was another main complaint of the printers. Proofed on wrong stock, over-inking, adulterating of supplied ink, and proofed dry instead of wet brought the most number of complaints on variations in progressives. Also, a high percentage was shown for progressives which varied from one proof to another in ink amount or ink balance.

In light of these survey results, Church, suggested: more attention be paid to finishing in terms of shoulders; more care be exercised to see that dots are not over-etched; more attention should be directed to the proofing area.

A pledge of union cooperation in helping to improve photoengraving procedures and the allocation of $10,000 in union funds toward photoengraving research came from Wilfred T. Connell, president of the Intl. Photoengravers' Union of North America. Connell said his union will give material and financial support to programs which will benefit the photoengraving industry.

He said the union is aware of what is happening in the photoengraving industry and wants to use any new developments as they become available.

The discussions on research were keynoted in an address delivered by C. L. Jewett, general manufacturing manager, Printing Products Div., Minnesota Mining and Mfg. Co.

Jewett said: "While the objectives of research are better quality, greater

Photoengraving Exhibits Attract Many at Dallas Convention

(All names read from left to right)

Left: Separations made on the Fairchild color scanner are examined by Ray Hoover, general manager, Sograph Inc., Baton Rouge, La.; Robert H. Downie, supervisor of printing development, Marathon Corp., Menasha, Wis.; J. A. V. Hyatt, vice president and general manager, and Edward Tracht, sales manager, both of Fairchild Graphic Equipment Div. Center: Powderless etching equipment was explained by Wes Miller, president, Master Sales & Service Corp., to Roy Blanks, general manager, Blanks Engraving Co., Dallas, and George F. Hoffmann, partner, Dixie Engraving Co., Savannah, Ga. Right: Studying a specimen of wrap-around printing on the Harris press were: John Butler, research director, Siviter Smith & Co., Birmingham, England; A. J. Powers, Chemco Photoproducts Co.; Norman Pozniak, manager of Magplate Div., Brooks & Perkins, Inc.

output and lower costs, it is interesting to note that in the long run research increases the number of job opportunities. While research may seem to eliminate or reduce the number of people needed in a given operation, almost invariably new jobs and new profits are created. We have improved technology and automation today as never before, and yet employment stands at a record 67,000,000. Research may change the character of a man's job, but it does not eliminate the need for the man. Further, we often find that when the character of a man's job is changed, he is often stimulated to new growth and new personal satisfaction."

Jewett argued that even small businesses can participate in research by supporting organizations linked with this field. He added: "No business is too small to be open-minded, receptive, alert, and willing to use the results of research by others which is being published daily."

Expands Engravers Research

This led to a highly optimistic report made by George D. Beck, chairman of the board, Beck Engraving, Philadelphia, on the status of Photoengravers Research, Inc., an independent research organization. He revealed that the membership has been doubled in the past year to a present 119 member companies and that PRI is now ready to open its own laboratory at 2447 Western Ave., Park Forest, Ill., a Chicago suburb.

Beck said the directors are suggesting a broader research program and hope to be able to offer better communications with members and establish a central information office. He mentioned the $10,000 union appropriation and revealed the American Photoengravers Assoc. has contributed $15,000 to PRI's work. He voiced hopes it would be a research organization for the entire photoengraving industry.

The new executive director of Photoengravers Research, Marvin C. Rogers, added that the biggest job is to get the new developments into the shop. He said a large portion of the organization's work in the future will be devoted to plant applications. He also thought its work would go beyond etching developments.

Road Ahead with Wrap-around

One entire session was devoted by the photoengravers to exploring every aspect of the wrap-around printing systems using thin gauge, one-piece metal and plastic plates. Appropriately called *The Road Ahead with Wrap-Around*, the meeting was moderated by Robert H. Downie, supervisor of printing developments, Marathon Div. of American Can Co., Menasha, Wis.

In his opening remarks, Downie was critical of the photoengraving industry for only showing token interest in this new letterpress printing method. He said lithographers have displayed the most interest in wrap-around printing for in it they can ". . . see a way to further encroach upon the letterpress field." According to Downie, printers can also see that it offers a method whereby they can install their own platemaking departments and eliminate the middleman—the photoengraver.

George M. Petrasko, coordinator of new product developments, Harris-Intertype Corp., advised photoengravers on how to make plates for the wrap-around presses. The maximum plate thickness, he said, that could be used without a pre-curving operation is around 1/32 in. He added they have worked successfully

Among 800 at Engravers Convention

(All names read from left to right)

1—Platemaking equipment was the conversational subject of George F. Egloff, president, Rapid Service Engraving Co., Buffalo, N. Y., and L. S. Florsheim, president, Robertson Photo-mechanix, Inc.

2—Grouped in front of the Marathon camera are Sam Anson, Chemco Photoproducts Co.; James Estes, superintendent, Rapid Grip & Batten, Ltd., Toronto, Can.; Bert Duck of Chemco.

3—Wrap-around printing was explained to photoengravers by George M. Petrasko and R. J. Neiderhauser, both of Harris-Intertype Corp.; Robert H. Downie (seated), supervisor of printing development, Marathon Corp., Menasha, Wis., and chairman of panel; Spilman B. Gibbs, Photo Products Div., Imperial Type Metal Co.

4—Visitors at Macbeth Arc Lamp Co.'s exhibit were Arch Dixon, engraving plant manager, and Arthur Geiger, staff cost analysis, both of Marathon Div., American Can Co., Menasha, Wis., who pose with Iredall Eachus, president of Macbeth.

5—The Royle router is explained by T. C. Malcolm, John Royle & Sons, to Sam Ross McElreath, president, Sam Ross McElreath Co., Dallas.

with much thinner plates. Commercial experience, he said, will eventually determine the optimum thickness.

It was Petrasko's opinion that if uniformity of thickness is maintained on a very thin plate which is held tightly to the press cylinder letterpress makeready, as such, is virtually eliminated. Making a magnesium or powderless-etched copper plate for wrap-around printing differs from making a powderless etching of zinc only in the etching step. Preparing a photopolymer plate is also very similar except that the sensitizing step is eliminated and the plate is washed out instead of etched.

Explains Inking System

An explanation of the development of the Harris wrap-around press was provided by R. J. Niederhauser, manager of sales engineering, Harris-Seybold Co., Div. of Harris-Intertype Corp.

He explained that during the development work it became increasingly apparent that the best opportunities for quickly solving the problem of inking a shallow relief plate lay in the cylinder type of inker. The cylinder inker principle is successful due to its ability to ink shallow relief printing areas, even in open form work, without inking the non-printing areas.

The Harris inking system provides bearer to bearer contact between the plate cylinder and the inking cylinder. This results, said Niederhauser, in control of the contact between the plate and the inking surface. He claimed the inking cylinder is supplied with a uniform, thoroughly worked up film of ink from the gripper edge to the trailing edge.

The Harris-Seybold spokesman went on to explain that the plate cylinder and impression cylinder also print with bearer to bearer contact, thus tying the entire printing couple, including the inker into one rigid unit under printing conditions. He said makeready is limited to full-sheet underlays on the plate and impression cylinders. One piece full-sheet underlays are required under the plate depending on plate thickness only to bring the printing surface up to proper travel line. One piece full-sheet underlays are required on the impression cylinder depending on the thickness of the stock being printed, also for the purpose of obtaining proper travel line.

An advocate of using copper for making wrap-around plates was Thomas S. AuBuchon, vice president, Collins, Miller & Hutchings, Inc., Chicago. He said the Per-etch or copper powderless process works consistently and is a natural for the etching of wrap-around plates. He pointed out, however, that the

(*Continued on Page 86*)

Speakers and Visitors at Photoengravers Convention

(All names read from left to right)

1—Important addresses to the photoengraving industry were delivered by Joseph Chanko, general manager, Conde' Nast Press, Greenwich, Conn., and F. E. Church of Time, Inc., New York.

2—Spokesmen for photoengraving research in Dallas were: (seated) George D. Beck, chairman of board, Beck Engraving Co., Philadelphia; Marvin C. Rogers, executive director, Photoengravers' Research, Inc., Chicago. Standing: C. L. Jewett, Printing Products Div., Minnesota Mining & Mfg. Co.; Paul Borth, newly-appointed research director, Photoengravers' Research, Inc., Park Forest, Ill.

3—Industry experts who spoke on wrap-around printing were: Bob Buedingen, Printing Ink Div., Interchemical Corp.; Hugh B. Gage, Du Pont Company; Thomas S. AuBuchon, Collins, Miller & Hutchings, Inc., Chicago; Bernard Halpern, Du Pont Company; Ronald E. Leary, Edes Mfg. Co.

4—Posed around the display of nuArc Company were: John Schultheis of nuArc; Charles Wilharm, Litho Chemical & Supply Co.; Henry Weisman of nuArc; Irving Z. Lee, president, Northwestern Photoengraving Co., Chicago; Larry James, president, Graphic Arts Engraving Co., San Francisco.

● *Third story of series indicates only a handful of printing firms conduct research and still fewer will talk about it.*

GRAPHIC ARTS INDUSTRY SHOW

No Agreement

THE experienced researcher, like the business man, plans each of his activities. Failure to plan always results in lost time and effort for both, but for research results it may mean complete failure or delayed successes.

The preparation of a story on the status of Graphic Arts research requires planning too. However, the real distinction between it and either the research program or the plan for business, is the dearth of factual material and the widely diverse attitudes and opinions of research. In attempting to broaden the information, I conducted a casual survey of the companies listed in the Research and Engineering Council of the Graphic Arts' *Listing of Research and Engineering Projects Pertaining to the Graphic Arts.* I discovered that of the 125 organizations listed, less than 10 are active printers. The majority are suppliers, research organizations, and others interested in the industry.

Few Printers Doing Research

It is difficult to believe that the few printers listed in this book represent the extent of research and development in the industry until we hear the frequently repeated ". . . the supplier has most to gain from research." This leads one to believe that the R&EC listings may be more nearly representative than we may wish to acknowledge.

For this story, we planned to devote major attention to the research efforts of representative members of the printing industry who are conducting programs suited to their exclusive needs. The low level of research activity, and the understandable reluctance of printing firms to discuss their activities, made this idea impractical. We have had to revise our approach in order that the nature of Graphic Arts activities in research might be understood. It is quite obvious to me that the amount of money being spent on non-productive experimentation in printing plants throughout the United States would support a really substantial research program based on sound scientific procedures. Why does this situation exist?

W. W. Garth, president of Photon, Inc., said, "Because of the heterogeneous nature of the printing industry, some sort of cooperative research program seems the best way to carry on development activity in the printing industry. . . . Perhaps a pattern like our Graphic Arts Research Foundation is the best way, but getting financial support for this purpose is extremely difficult."

The activities of the Letterpress Research Committee, cooperating with the Research and Engineering Council of the Graphic Arts during the last two years, seems to be approaching a solution with its Printing Foundation activities. The full nature of this foundation and the successes at fund raising have not yet been made public, but the seeds have been planted.

Why There Is No Agreement

The heterogeneity of the printing industry is probably the best single explanation for its present research position. When this fact is considered along with the fact that there has been no consistent engineering philosophy developing in printing management, it becomes evident that agreement on industry research needs and practices will be virtually impossible to attain.

The scientist or engineer, in his analysis of the printing operations, will readily recognize similarities between the platemaking process of letterpress, offset, gravure and silk screen. He will find similar comparisons between application of ink to paper by these processes. He has difficulties trying to reconcile the distinctions placed on them by the different industry branches. It is only when he realizes that little or no fundamental data have ever been determined for these processes; and that they were developed by trial and error efforts of ingenious workers, that he resigns himself to the situation and becomes frustrated.

The process needs of the magazine printer, label printer, boxboard printer, and the film or foil printer are distinctly different, even

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THE SERIES TO DATE:

Dr. Rogers, in his first article, explained that research in the Graphic Arts industry was, for the most part, a misnomer. What is really taking place he believes, is simply development work. He blamed printers for this state because of their lack of interest and support for research activities.

The author explained that there is no attraction of scientific talent to this industry, no scientific basis for many of the projects now undertaken. Too frequently, he asserted, research is a guise for developing gadgets for existing machines rather than investigating processes.

Dr. Rogers indicated that most printing research at this time is taking place outside the industry, the suppliers contributing the most. He warned that any prolonged activity of this type could result in the control of the printing industry by this group.

In part two of the series, Dr. Rogers elaborated on the supply industry, explaining the types of research now being done. Although complimenting the supply industry on their advancements which have contributed to printing, be blamed printing machinery manufacturers for contributing only "gimmicks" indicating that any advancements in this area have been the result of customer pressure.

By MARVIN C. ROGERS, Ph.D.
Consultant, Flossmoor, Ill.

Research Needs

though they all depend on the same or nearly the same physical or chemical phenomena. They have not been reduced to common denominators as have the processes of other industries. Much of the attention in these different branches of the industry has been devoted to mechanical types of development. Specialization has been mechanical in nature, rather than process, and it is hard to comment critically on this choice.

Garth made another observation when he said, "Most printing management does not have a clear understanding of the meaning of research. Most activities in printing have been aimed at what I call mechanization and higher speed rather than the development of new and better processes. . . . Unfortunately, results are sometimes expected after a few months of efforts. It is not recognized that months and years are needed for results to be of real significance."

Development Effort by Printers

In the center of what seems to be little research activity on the part of individual printing firms, there are excellent examples of development effort and a strong desire to carry on research at the same time. J. R. Parrish, Meredith Publishing Co., Des Moines, Iowa, expressed his case clearly when he said, "Basically, the responsibility for the development of any product should rest with the one who produces it. . . . In our field, some printers have been forced into research because equipment and processes (needed for the customer) were not available, and the suppliers were not taking the lead. The common excuse . . . 'too small a volume to justify research program' is usually given. . . . We are not in a position to carry on a great deal of fundamental research here. Programs requiring such (specialized fundamental study) are farmed out to specialists for solution."

Like other organizations in similar positions, the Meredith technical group takes on problems peculiar to their own operations, equipment and processes. The activities are related primarily to direct cost reduction and are developmental in nature.

Another large organization in the industry, Western Printing and Lithographing Co., had its position described quite modestly by Paul Lyle when he said, "We have no activity that could be properly described as an organized research activity in our company. We do have several technicians and a large portion of our supervisors do have technical training. They are constantly seeking to improve methods, develop new machines and to utilize new materials.

"We have developed several significant pieces of equipment which were not available on the market. In each case, it was apparent that there was a big pay-off for us if such equipment could be developed. We have made casemakers, special machines for making book covers, packer box deliveries . . . and a highly specialized approach to or-

A completely equipped web offset plant is the laboratory for these research specialists at the Graphic Arts Research Div. of Rochester Institute of Technology, Rochester, N. Y. Work has been done here on three-color process printing for newspapers.

Improvement and simplification of litho platemaking materials and methods is constantly going on in the Chicago labs of Lithographic Technical Foundation. Special test plates like the one shown here include areas made with different materials on the same plate for simultaneous testing on offset presses.

der filling, employing conveyors. These are a few of the things we have worked out which were just not available on the open market."

Lyle stresses the mechanical nature of the industry, but it is obvious that he recognizes the need for research consciousness on the part of a broad section of supervisory and other personnel.

Views of Industry Leaders

Similar attitudes have been expressed by other leaders in the printing field. It would be difficult to find a time during the past 10 or 15 years, when Kingsport Press, Kingsport, Tenn., under the leadership of E. J. Triebe, was not studying one or more of their operations to learn weaknesses and to develop new processes or machines to correct them.

No one in the industry has been more vocal, or devoted more effort to the promotion of letterpress research, than Joseph Chanko, general manager, Conde Nast Press, Greenwich, Conn. He tried to organize a specialized program late in the 1940s, but he has been one who has expressed the belief that the heavy equipment supplier must bear a larger portion of the cost of research.

Most of the development work going on in larger organizations relates to problems of a very specific nature which is to be expected. It is also quite likely that the tremendous impetus given to letterpress printing back in the 1930s by machine coated paper, heat-setting ink development of Interchemical Corporation, and the large magazine printers like R. R. Donnelley and Sons, was due largely to pressures from customers, insisting that something new had to be developed.

The Donnelley firm, where a major part of this development was done, has consistently devoted attention to developments peculiar to its requirements. Other large printers with whom I have discussed this problem are unanimous in their support of the research idea, but they frankly admit that their efforts go primarily to development of ideas and machines intended to improve quality or reduce costs of printing, binding or platemaking. They all insist that research not geared to immediate pay-off is difficult to sell to management. This attitude makes the heat-set printing development even more significant because it required the imagination and efforts of not one organization, but three in as many different industries.

Printers 'Won't Talk'

A reluctance, on the part of the large printers at least, to discuss any phases of their research and development programs makes it impossible to present an accurate picture or evaluation of the industry's activities, aims and objectives. It is quite obvious from the R&E Council's listing of research projects that some are reported for publicity or "gimmick" purposes. Others must be so generally reported as to make them seem unimportant to the reader.

One attitude expressed to me by one of my research friends was this: "Of course many of your questions can be answered with generalities, but this would be a disservice. On the other hand, since PRINTING PRODUCTION is read by the (printing) industry itself and not necessarily by potential customers, it is considered inadvisable to blueprint our activities."

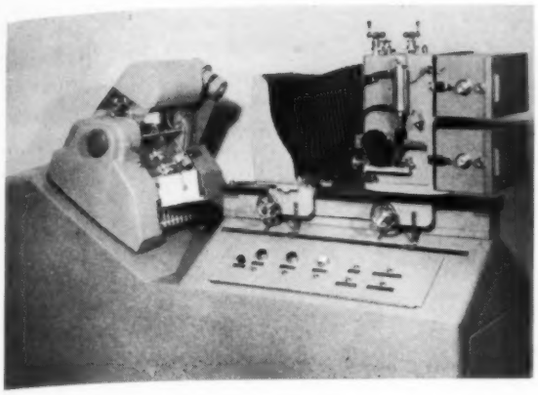
These attitudes are understandable even when they seem to be unreasonable. Sometimes they hide inactivity. The attitudes expressed by Lyle, Triebe and others may be more helpful to everyone, however, because they tend to apprise the supplier of the importance of the industry's needs and give him the necessary impetus. Keeping quiet and refusing to talk about one's troubles or successes will not solve the problems or give proper credit to the successes.

One of the most refreshing attitudes toward research and development goals is that of the Marathon Div. of American Can Co., where Robert Downie, supervisor of printing development, has been consistently emphasizing the need for a wrap-around letterpress plate. The same is true of E. W. (Ted) Thomas of Speaker-Hines and Thomas, Inc., Lansing, Mich., who has done considerable work in the same field.

Both of these companies are just as anxious as others to find out as much as they can for their own benefit, but they are also willing to discuss the problems and their ideas for solution with others. Both Downie and Thomas have been in the center of many letterpress planning sessions. Their work, and that of J. W. Bradley of Litho Color Corp., and Photoengravers Research, Inc., Atlanta, Ga., have encouraged the developments which resulted in the Harris wrap-around press. Most of the work related to the wrap-around idea needed little in the way of research, but there was a great amount of concentrated and ingenious development in the entire study.

Time, Incorporated, a publisher, holds a unique place in Graphic Arts research. Here is a publisher who, as one of the largest customers

(*Continued on Page 88*) •



The Compos-O-Line Camera automatically photographs typed information on cards. End product is a film negative which, when developed, can be used to make lithographic printing plates. The system is said to eliminate the need for proofreading and correction.

Camera Photographs 7200 Cards per Hr.

An automatic photographic system which converts typed copy on cards directly into a film negative was introduced in September by Lithoid, Incorporated, to the Graphic Arts at the Spectra equipment show in New York.

This system is said to be especially effective for printing repetitive work such as directories, where original type is reused. The Compos-O-List system, being photographic, provides undamaged type for a clean reproduction. Additions to original typed matter cannot be detected.

In this system, original information is placed on standard accounting cards. The cards are sorted into the desired sequence by standard accounting machines and then automatically photographed onto a strip of film by the Compos-O-Line Sequential Card Camera. Electronic detectors prevent misses or doubles. The film is developed and used to make lithographic printing plates.

The Compos-O-Line Sequential Card Camera is mounted on a base equipped with casters and operated on 110 v. power. The camera can be operated at a rated speed of 7200 cards per hr. Because the camera cannot "lie," proofreading and corrections are eliminated.

PIA Plans Conferences; Includes Production Meet

PIA's Production Conference will be held at the Edgewater Beach Hotel in Chicago June 13-17, it was announced recently in New York by the PIA Business Management Committee.

Three days will be used for institute training and two days will feature discussions on production problems and techniques. PIA will hold other business management conferences during 1959-60.

PIA's Sales Management Conference will be held March 23-25 at the Edgewater Beach Hotel. During the conference a special training institute for sales management will be held March 21-23.

The President's Conference for top management executives will be held Feb. 7-12 at the El Mirador Hotel, Palm Springs, Calif.

WHAT'S AHEAD FOR THE READER

Your new and revised Where To Buy Guide for 1960; a printing equipment and supplies reference issue of immeasurable value to you throughout the next year.

It contains listings of more than 1000 different companies who supply the printing industry. Departmentalized sections are designed for your convenience in locating good supply sources for the equipment and supplies you plan to purchase in 1960.

In addition, there are complete sections on Graphic Arts trade names; alphabetized listings of manufacturers, suppliers and dealers; 18 pages of important press specifications; and an index of paper trade names keyed to the supply source. The most valuable reference issue of the year is in store for you next month.

Informative reading will also be combined with the reference section. Look for stories on handling paper in the pressroom, a newspaper conveyor system, important developments in the litho field, and another report on *Status of Graphic Arts Research*.

Litho Plate Plant

(Continued from Page 37)

LTF's Nicohol treatment which improves the bond between the copper and lacquer.

A procedure which Edmund Matusak, plate deparement foreman, states as being unique to PLP is the final inspection given to all outgoing plates. The asphaltum is replaced by a crayon ink which is said never to dry completely. A direct transfer is made from this crayon ink and is then checked for fit, lap, register, etc, against the copy provided by the customer. Although a little more time consuming, correct plates are guaranteed to the customer regardless of the kind ordered. This final inspection is applied to all plates, color as well as black and white.

All of PLP's chemicals are pur chased in a prepared form since they feel that this provides better control.

The service area of PLP includes southern Ohio and extends eastward to New York State and Pennsylvania. Local business accounts for less than half of its total sales. Sources of work arise mainly from the overflow of other printing companies and those which are not equipped with platemaking facilites for fine quality color platemaking.

Many customers of Photo Litho Plate Co. have been recognized in national competitions by receiving awards for excellence in color reproduction.

When asked what he would like to see most in the platemaking industry Huefner, sr., replied: ". . . more and better training so that the employees of one department may know the problems encountered in the preceding and succeeding departments." He believes that quality depends upon a worker's craftsmanship and pride that the person shows in his work.

● *Photosensitive plates and photographic processing hold attention of 600 at Boston conference*

By SIDNEY JAMES PAINE
Boston Correspondent

NEW ENGLAND NEWSPAPERS

Examine New Processes

EVERY newspaper production department came under careful scrutiny in discussions held last month at the 21st New England Newspaper Mechanical Conference in Boston's Hotel Statler. More than 600 were in attendance for the eight educational clinics which included talks on electrical maintenance, tubular presses, and machinists' problems.

George F. Luft, stereotype superintendent, New Haven (Conn.) *Register*, was elected to the presidency of the Conference, succeeding Frank A. Downey, mechanical superintendent, Holyoke (Mass.) *Transcript-Telegram*. Frederick L. Johnson, composing room superintendent, New Haven (Conn.) *Register*, was named vice president. Re-elected as secretary-treasurer was Walter C. Crighton, composing room superintendent, New London (Conn.) *Day*.

The 1960 conference is to be held at the Hotel Statler Hilton, Boston, Oct. 15-16.

An appraisal of the future of photosensitive polymeric printing plates for newspaper reproduction was made by Daniel M. Sullivan, research engineer, Shawinigan Resins Corp. Sullivan said in order for the photosensitive plastic plate to replace existing metal plates, the following requirements would be necessary:

(1) They must handle and store as easily as metal plates. (2) Exposure and engraving must be as feasible as they are for existing plates. (3) Re-etch characteristics must be equally as good as are the metal plates. (4) Dimensional stability must remain constant. (5) There can be no increase in the cost per square inch as compared with the metal plates. (6) They must be capable of matting as well as the present plates. (7) Quality and number of impressions must at least equal present metal plates in direct printing. (8) The plastic plates should be no more difficult to salvage, dispose of, or reuse than the competitive metal plates.

The major advantages of a plate having these features would be in cost, quality, speed and safety, Sullivan said. Even with these qualities, he added, such a plate would not constitute a major advance in the newspaper production field.

Sullivan emphasized that plastic plates should not be directly compared with metal plates. Rather, the entire hot metal process which is used in producing the metal plates should be compared with the cold composition process used in conjunction with producing the plastic plates.

"In the final analysis, the process which produces a polymeric printing plate must do so at an appreciably lower cost per square inch of actual printing surface than a process which produces a stereo plate," concluded Sullivan.

Photographic Processing

A photographic development which holds promise for darkroom technicians in the Graphic Arts was explained by Harry S. Keelan, vice president, Cormac Chemical Corp. Termed a photographic monobath, the development is actually a combination developer-fixer in one solution.

Extreme speed of development is one of the characteristics of the monobath solution. Because of this, the resulting negatives depend upon the exposure given to the film. Keelan indicated that applications to industrial situations thus far have been few, and that these are "virgin fields for exploration."

One application of this development to the printing industry lies in the areas of color separation, Keelan said. Because of the control

New officers of New England Mechanical Conference, left to right, are: Frederick L. Johnson, New Haven (Conn.) *Register*, vice president; Francis A. Downey, Holyoke (Mass.) *Daily Transcript-Telegram*, retiring president; Walter C. Crighton, New London (Conn.) *Day*, re-elected secretary-treasurer; George F. Luft, New Haven (Conn.) *Register*, president.

over variables, use will be found for monobath processing wherever ". . . exposure can be predetermined and where extremely accurate control is desired in producing multiple negatives or prints.

Lewis of ANPA Speaks

Richard E. Lewis, manager of the Mechanical Dept., American Newspaper Publishers Assoc., delivered a talk at the composing room clinic on the future of photocomposition in the newspaper field. He predicted photocomposition units will be in operation in at least 150 plants within 18 months. Management of plants contemplating the installation of photocomposition systems were urged to thoroughly investigate costs, quality and flexibility of cold composition methods.

Flood control systems in use in the Waterbury (Conn.) *Republican-American* and Providence (R. I.) *Journal-Bulletin* were described by representatives of the two newspapers, Classen P. Perkins and Chester W. Ward respectively. Methods of sealing off apertures with various types of doors and barricades, measures for the protection of electrical equipment against water damage, and the use of mu switches in thermostats and mercury relays to save down time on linecasting machines were among the experiences described.

Color came in for discussion with an address presented at the pressroom clinic by Al Yelmgren, ink chemist, ANPA Research Institute, Easton, Pa. His talk covered inks as used in the newspaper field, transparent and opaque inks, problems encountered in attempting to match originals and other interesting aspects of color as applied to newspaper work. (See story on page 40 of this issue.)

99% on Photocomposition

Photocomposition is now responsible for more than 99% of the entire display advertising at the South Bend (Ind.) *Tribune*, reported George P. Kuhn, production manager. This volume is averaging more than 350,000 to 385,000 lines per week.

With the addition of an Intertype Super Display Fotosetter, the total units at the *Tribune* now number five. Prior to this, the *Tribune* operated four Fotosetters on a two shift basis and was able to handle the entire volume of ad copy. "Actually we are setting more ad copy than was formerly set on seven hot metal mixer-type ad machines," stated Kuhn.

With the addition of the new Fotosetter, all photolettering machine work has been eliminated. The new Fotosetter features two lens turrets, each containing seven lenses. By using 8, 12, and 18 pt. base size matrices on the machine at the same time, type can be keyboarded on photographic film or paper, right or wrong reading, in sizes from 3 to 72 pts. at a measure of 51 picas.

Kuhn said that the integration of the cold composition machines was accomplished by installing them alongside the hot metal machines in the *Tribune's* ad alley. This, he believes, has made it easier to train personnel in photocomposition.

(*Continued on Page* 68)

Newspapermen and Suppliers at New England Mechanical Conference

(All names read from left to right)

1—William Farley, Providence *Journal-Bulletin;* Joseph Daigle, Zimmer Supply Co. of New England; Kenneth Lowe, Brockton (Mass.) *Enterprise-Times;* Al Nault, Hyannis (Mass.) *Cape Cod Standard-Times;* Wilfrid Wood, assistant composing superintendent, Boston *Herald-Traveler.*

2—S. S. Mason and George B. Skidmore, Skidmore & Mason; William Morrow, International Paper Co.; Joseph L. Woods, production manager, Hartford *Times,* and former president of New England Conference.

3—Raymond Finzer, Wood Flong Corp.; Fred Guertin, night mechanical superintendent, Worcester (Mass.) *Telegram-Gazette;* Floyd Laurenty, Albany (N. Y.) *Times-Union;* Carlton Schwaner, Garden City (N. Y.) *Newsday.*

4—William Eldridge, production manager, Arlington (Va.) *North Virginia Sun;* Earl C. Godshall, Photon, Inc.; Raymond Dufresne, and Ralph Cataloni, Boston *Globe;* C. Shepley Cleaves, Ludlow Typograph Co.; Walter C. Crighton, composing superintendent, New London (Conn.) *Day.*

PRINTING PRODUCTION's IDEA FILE

SHORT CUTS · TIME TRIMMERS · HELPFUL HINTS · MONEYSAVING IDEAS · IDEA SWAPPING · GIMMICKS & GADGETS · TROUBLE ELIMINATORS

REDUCING LOCKUP-MAKEUP TIME

How can we reduce the lockup and lineup time for printing publications? Recommended: Obtain special chases made expressly for each publication, with fixed bars to facilitate quick, solid lockup and to minimize lineup adjustments.—*By courtesy* The Imprint, *published by New York Employing Printers Assoc., Inc.*

TIRED OF BALING PAPER?

So were we—until our waste paper dealer said he'd just as soon have our waste stock delivered in "baskets." We built four large carriers of welded angle iron frames, lined with ¼ in. plywood. We mounted these on 2 in. by 6 in. cross bar bases with two 8 in. wheels at each side, and two 4 in. swivel wheels at each end. We used tie-on lids. These "baskets" have eliminated a costly baling job and have made the handling and separation of "all white" and colored waste an effortless operation.—*H. Ben Albitz, production manager, C. R. Moore, jr., Pittsburgh. Courtesy Kimberly-Clark Corporation.*

CONTROLLING OVERTIME RECORD

How can we tighten control of overtime? Recommended: Daily recording of overtime on cards, supplementing regular time sheets. Card to indicate workman, job, work done, time, and initialed by foreman who authorized the overtime. Daily review by management of cards filled out previous day.—*By courtesy of* The Imprint, *New York Employing Printers Assoc., Inc.*

HALFTONE FROM SCREENED PRINT

Recently we had occasion to make a halftone cut of a portrait, and since the original copy was unavailable we had to work from a 133-line halftone print. In cases like this, it is usually impossible to avoid an unpleasant pattern in the screen. However, we solved the problem by first making a tiny ¾-inch high negative from the 3-inch high picture. From this negative two prints were made—one the same size and one enlarged to original size. (The latter was a "soft print" on unglazed mat-finish photo paper.) The engraver then worked from the large print since the dots hardly showed at all. The result—a halftone of exceptional quality on a job that engravers had declared impossible!—*Sister M. Emmanuel, Academy of the Visitation, St. Louis. Courtesy Kimberly-Clark Corporation.*

For the Reader

A chance to be paid for ideas which have netted savings in time, money and effort in your printing plant is offered readers of *Printing Production.* If your idea is considered worthwhile it will be printed in the Idea File, a regular *Printing Production* feature, and a check will be mailed to you.

Send as many as you wish to: Idea File Editor, *Printing Production,* 1276 W. 3rd St., Cleveland 13, O.

PLATES COME OFF BLOCKS

In certain instances, the flush-mounted engravings separate from blocks. Recommended: Specify 6 pt. flange of metal on all sides of engraving, then saw off flange only on sides that must be flush; nail flanges to block on other sides. This method also enables true up when engravings are inaccurately squared on blocks.—*By courtesy of* The Imprint, *N. Y. Employing Printers Assoc.*

Type Case Directory Index System

In those composing rooms doing a considerable volume of hand composition for publication typography as well as machine and hand composition of all other kinds, it is advantageous to provide a type case index system so the compositor can locate any case quickly. This applies to regularly employed compositors as well as extra men who may be employed temporarily during rush periods. It also applies to newly employed compositors who have been engaged as situation holders. In these instances, considerable production time could be lost if some indexing system were not used.

In the plant of Dayton (O.) Typographic Service there are 34 type cabinets from which hand composition is done. These cabinets contain approx. 814 type cases pres-

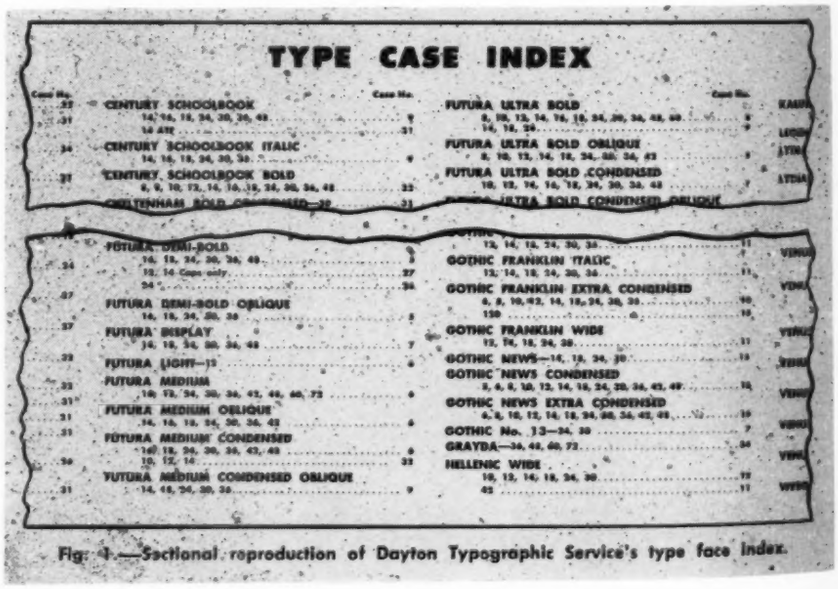


Fig. 4.—Sectional reproduction of Dayton Typographic Service's type face index.

ently in use. Contained within these cases are 131 type series ranging from 6 pt. to 120 pt., including special cases for fractions, special characters, arrows and ornaments.

Two Thompson casters are kept busy replenishing type and spacing material; in addition, Giant Monotype and foundry type are stocked. It can be seen that if a regular compositor were to be assigned to different kinds of work he would lose productive time frequently in locating a particular series of type. Also, without an indexing system, the newly employed compositor would have difficulty in locating a type series quickly.

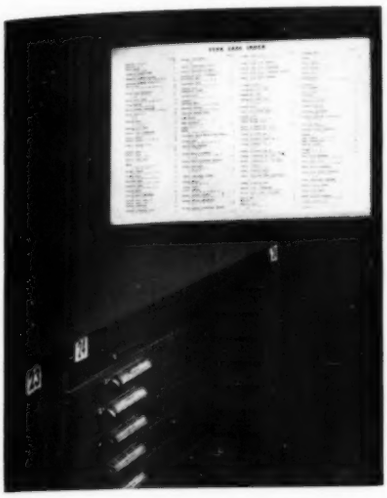


Fig. 2.—Type face index is mounted on wall in each two-cabinet alley; method of numbering type cabinets is shown.

The directory or indexing system employed at Dayton Typographic Service consists of a chart with all type faces and sizes listed together with the cabinet numbers. The chart is approx. 15½ in. wide by 11 in. deep proofed on heavy white enamel stock. As shown partially in Fig. 1, the type face series name is set caps of an 8 pt. sans serif extra bold face. The point sizes are listed beside or immediately below the name of the series. The cabinet number is at extreme right. Cabinets are arranged in numerical order from front to rear of the composing room.

One of the type case directories is mounted on the wall in the two-cabinet alley. The method of mounting the index on the wall is shown in Fig. 2, as well as the method of numbering the type cabinets.—*Leo Duffley, plant superintendent, Dayton Typographic Service, Dayton, O.*

INFORMATION FOR
Litho Printers and Platemakers

Membership in the National Association of Photo-Lithographers offers many benefits to individual lithographic platemaking and printing plants. Listed below is some of the informational material available to members.

Billing for Over or Under Runs—A Lithographic industry survey (4 pp - B6/22/59)
Paint Color Selector with swatches of color (12 pp - F2)
Simplified Estimating Manual (10 pp - N5)
Estimate Register and Salesman's Daily Report (3 pp - B7/27/59)
Spraying Equipment Survey (3 pp - 6/2/59)
Advertising Suggestions for the Lithographer - by Walter E. Soderstrom (3 pp - U8)
Preventive Maintenance for Small Plant (15 pp - V1)
Sales Training Ideas - by Walter E. Soderstrom (8 pp - U9)
Building a New Plant - Source material (48 pp)
Workable Sales Control for the Medium and Small Size Lithographer (4 pp - G5)
Ratios of Expenses to Sales - Small, Medium, Large Plants (4 pp - B7/27/59)
Legal Year-end Adjustments that may Benefit the Lithographer (4 pp)
Advertising and Selling Lithography (4 pp - L1)
Analyzing, Selling, Production and Management in the Lithographic Plant (9 pp - H4)
Sales Conference Agenda Outlined (11 pp - A7)
Building and Directing a Sales Force (A4)
Contract between a Salesman and the Company (1 pp - C4)
Sales Contract Outlined—How to Sell Standard Work on an Annual Basis (C3)
Survey on Compensating Salesmen and Marking Up Material (In Works C2 - J9)
Operating a Lithographic Sales Program (28 pp - M9)
Long Range Planning and Marketing a New Service (5 pp - D5)
Proforma Contract Set Up for Selling Price List Work on an Annual Basis (R2)
Accounting and Cost System for Lithographers (36 pp - G1)
Building Budgeted Hourly Cost Rates in a Lithographic Plant (76 pp - G2)
Production Standards for Offset Lithographic Equipment and Operations (24 pp - H2)
Forms Book showing forms actually in use in many lithographic plants (Heavy binder carries forms—available on loan basis, only)
Submitting a Printing Estimate—a good form (4 pp - G6)
Plate Cost Estimating Usages (P8)
Purchasing Procedure Reviewed (7 pp - C6)
Production Control in a Lithographic Plant—16 pp Booklet showing forms filled in (E5)
How We Run the Planning and Scheduling Department (4 pp illustrated K9)
Outlining the Functions, Responsibilities, Authority and Operational Activities in a Lithographic Plant (5 pp - G4)
Wage Scales, Working Conditions and Complements of Lithographic Press Help in 49 Cities (NAPL - O)
An Employee Suggestion Plan—Form Outlined (7 pp - L7)
Job Definitions of Litho Workers—A source file of information on (5 pp - I-1)

For details on membership and the above publications write:

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS

317 W. 45th St. New York 36, N.Y.

The newly elected officers of the different districts of PNMC are, standing, left to right: Fred Moyer, sr., secretary, Southern; Charles Gallagher, second vice president, Southern; Werner Sell, first vice president, Southern; and Edward Maggi, secretary, Central. Seated: Charles Fitzsimmons, second vice president, Central; Ed Roth, second vice president, Northwest; Don Newhouse, secretary, Northwest; and Ernest Loebner, president, Northwest.

PNMC Peers Into Future of Production and ROP Color

By FRED MOYER, Sr., *Bell, Calif.*

IMPROVED and more profitable ROP color, greater efficiency in the mailroom, and the future of newspaper production were among the topics discussed at the 23rd Pacific Newspaper Mechanical Conference. The conference was held Sept. 25-27 in San Diego and was attended by 550 representatives of the newspaper field.

Consistent quality color reproduction was pinpointed as the key to profitable use of ROP color by Don V. Weber, Houston *Chronicle*, in his address, *Playing for High Stakes—ROP Color*. According to Weber, national advertisers cannot afford to have good and bad color reproduction; it must all be good if their campaigns are to be successful. Therefore, he continued, quality reproduction must be assured advertisers from press run to press run.

Quality ROP Color

Weber suggested the following as steps to take toward quality color reproduction:

(1) Train color men, especially supervisors, in the best color techniques. Provide them with the proper tools, and see that they use them.

(2) Test men for color perception. Those who do not possess normal color perception cannot appraise color matches properly.

(3) Take advantage of standard inks and the ink blending systems.

(4) Use common sense in decisions. For example, use the brand of newsprint which seems to give the best color reproduction.

It was announced at the conference that a booklet dealing with difficulties encountered in ROP color has been printed for distribution in the conference area. The booklet is entitled *Agency-Newspaper Production Manual.*

Automation in Mailroom

In a talk by Willmott Lewis, jr., production manager, Washington (D. C.) *Star*, transforming the mailroom of today into the mailroom of tomorrow was discussed. According to Lewis, automation is the way to achieve this.

Speaking in general terms, Lewis recommended installing the following equipment: stackers, conveyors, tying machines, inserting machines, and programmed dispatch conveyors. Besides saving on manpower, he explained that some of this equipment offers secondary advantages. For example, he said that the stacker allows the production manager to plan his manpower upon the number of presses used rather than upon the number of pages in an edition; yields neat bundles; and produces bundles in counts of 15-20-30, etc., as well as in the standard 100-50-25 counts.

Because of the production man-

Among those attending the Pacific Newspaper Mechanical Conference were, left to right: Harry Wingard, Monterey (Calif.) *Peninsula-Herald;* Milton Brown, production manager, Salt Lake City (Utah) *Deseret News-Telegram;* Eugene Thirkill, assistant production manager, Hillbro Corporation, Los Angeles; Carl Lanum, press superintendent, Tucson (Ariz.) *Star-Citizen;* Ken Chenowith, press foreman, Wave Publications, Los Angeles; Robert Cooper, press foreman, Bakersfield (Calif.) *Californian.* Also present were: Donald Newhouse, production manager, Portland (Ore.) *Oregonian;* Richard Clark, press foreman, Monrovia (Calif.) *News-Post;* Prisk Paddock, Pasadena (Calif.) *Independent* and *Star News;* Don Ferguson, assistant production manager, Vancouver (B. C., Can.) *Pacific Press;* and George Jackson, production manager, Calgary (Alberta, Can.) *Herald.* Some 550 representatives of the newspaper field were in attendance.

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ager's familiarity with mechanical operations, Lewis urged that the mailroom be placed under the production department rather than the circulation department.

James S. Copley, publisher, San Diego (Calif.) *Union* and *Evening Tribune* and president, American Newspapers Publishers Assoc. Research Institute, spoke on the future of newspaper production. Teamwork between newspaper departments plus constant research will determine that future, he said.

Developments such as the packless mat and the fast-etch process were cited by Copley as proving the worth of research activities. According to Copley, one research expert has spoken of the possibility of marrying some cold type and hot type methods to "spawn an incredible increase in production." Continuing Copley said this expert envisions the possibility of "typesetting on column-width film, ready for engraving at from four to 40 times our current speeds."

Also speaking in terms of the future was Quido Herman, Star Parts, Inc., Los Angeles, who commented on the machinist of tomorrow. According to Herman, it is necessary for the machinist to learn new processes and new equipment even before they come into common use; for, he stated, "within his domain is the key to successful operation of the plant."

Elect New Officers

Officers elected at the conference were: Northwest district—Ernest Loebner, Olympia, Wash., president; Fred Moyer, jr., Portland, Ore., first vice president; Ed Roth, Portland, Ore., second vice president; and Donald Newhouse, Portland, Ore., secretary.

Central district—Harry Davidson, San Francisco, first vice president; Howard Fitzsimmons, Monterey, Calif., second vice president; and Edward Maggi, San Francisco, secretary. Southern district—Werner Sell, Long Beach, Calif., first vice president; Charles Gallagher, Los Angeles, second vice president; Fred Moyer, sr., Bell, Calif., secretary.

The outgoing president is Gerry Burke, production manager, San Diego *Union-Tribune*.

The 1960 meeting of the PNMC will be held in Portland, Ore., Sept. 23-25.

Label Manufacturers Merge

The merger of the Label Manufacturers National Assoc. and the Lithographers & Printers National Assoc., accepted by both memberships last year, has been officially approved by the State of New York.

The label manufacturers, representing the major producers of food, beverage and tobacco labels will function as an autonomous division of LPNA and will be known as the Label Manufacturers Div. Present officers are: James L. Murphy, Consolidated Lithographing Corp., president; Charles C. Rossotti, Rossotti Lithograph Corp., vice president; Nathaniel Gamse, Gamse Lithographing Co., treasurer; and Thomas J. Curran, executive director of the Label Manufacturers.

nuArc Moves to New Quarters

nuArc Company, Inc., has moved into larger Chicago quarters located at 4110 W. Grand Ave. At the new location, a showroom exhibiting the entire nuArc line will be open at all times to anyone in the Graphic Arts field.

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Firm Offers Test Plates—In order to determine the relationship between depth of etch required and magnitude of white space between printing surfaces on wrap-around plate presses, special test plates have been prepared by J. W. Rockefeller, jr., and Associates, 640 Morris and Essex Turnpike, Short Hills, N. J. The plates are being distributed to manufacturers of rotary presses and will be used for testing conventional offset and dry offset presses as well.

Most of the large press manufacturers in this country and in Europe have requested the test plates and have agreed to submit samples run from them with the understanding that the results will not be disclosed. The first test plates will be followed by others as rapidly as possible.

LTF to Study Research Expansion—At a recent directors meeting of Lithographic Technical Foundation, plans were made to appoint a committee to study ways and means of providing an expanded research program. Financial and membership reports were highly encouraging reported LTF.

Twelve additional directors were elected as follows: Felton Colwell, president, Colwell Press, Minneapolis; Harold W. Lee, director of lithography, J. L. Clark Mfg. Co., Rockford, Ill.; Forrest R. Taylor, president, Midland Lithographing Co., Kansas City, Mo.; Harold Braun, president, Fetter Printing Co., Louisville; Robert H. Downie, supervisor of printing development, Marathon Div., American Can Co., Menasha, Wis.; Warren Y. Hull, president, North Pacific Bank Note Co., Tacoma and Seattle, Wash.; Ralph D. Cole, president, Consolidated Litho Corp., Carle Place, L. I., N. Y.; Walter F. McArdle, president, McArdle Printing Co., Washington, D. C.; E. J. Nicholson, president, Brigdens, Limited, Toronto, Can.; Eric Rongren, vice president in charge of engineering, R. R. Donnelley & Sons Co., Chicago; Albert Love, president, Foote and Davies, Inc.; Richard Walters, executive vice president, United States Printing and Litho Co.

James Armitage, executive vice president, Inland Press, division of Master Craft Corp., Chicago, and John L. Kronenberg, manager of printing and lithographic papers division, S. D. Warren Co., Boston, were elected to fill Board vacancies.

Kodak Scientist Reports on Halftones—New information that can be used to specify the characteristics of an ideal halftone screen were reported on recently by John A. C. Yule, Graphic Arts Div., Kodak Research Laboratories.

Speaking before the 5th Intl. Conference of Graphic Arts Research Institutes at Lehigh University, Bethlehem, Pa., Yule first reviewed the relationship between dot area in halftone reproduction and printed density. He discussed ink spreading in the reproduction and showed that it is not uniform throughout, but is greatest in shadows.

The second part of the paper outlined a method for investigating the nature of variations that occur in halftone reproduction. This can be done by statistical analysis of halftone characteristic curves much like those used in continuous tone photographic studies, Yule said. In conclusion he presented data showing the effect on these characteristic curves of various changes in the printing process. According to Yule, this data could lead to specifications for an ideal halftone screen.

Paper Company Research Leader—Dr. Dan W. Manson recently joined the Oxford Paper Co. as fundamental research group leader, it was reported by Harold M. Annis, vice president. Manson was graduated from the University of Vermont with a BS degree in chemistry in 1954. In 1956 he received his Master's degree and this past June his Ph.D. degree, both from the Institute of Paper Chemistry, Appleton, Wis.

Graphic Research Formed at Stanford

To help focus the new ideas, techniques, skills of a wide range of disciplines on the improvement of printed communication, Stanford Research Institute, Menlo Park, Calif., has established a Graphic Sciences program. The program is being coordinated by Virgil P. Barta, formerly of Graphic Arts Div., Technicolor Corporation.

Research in the graphic sciences will be centered in the Engineering Division, largely because a major contribution can come from experiences and developments in electronics.

The Graphic Arts industry consists of many industries related only in that they point to a common end-result—words and illustrations on paper. The technologies of papermaking, typesetting, engraving, ink manufacture, and printing, while dissimilar, are basically combinations of applied chemistry, physics and electrical and mechanical engineering.

Several comparatively new fields of science and engineering can offer techniques of signal benefit to improved, cheaper or faster printing. Some of these are television, electronics, magnetics, solid-state physics, data handling and systems engineering.

Examples of research developments at the Institute illustrate the applicability of new techniques, either directly or indirectly: (1) Principles of electrostatic printing have been applied to the Videograph; (2) Magnetic inks have been developed, techniques have been worked out for applying them by conventional printing methods and by ribbon; (3) High speed paper handling mechanisms have been developed. Documents such as bank checks can be sorted, by magnetically-read number, at speeds up to 50 per sec.

Many situations in the field of graphics involve data that are gathered, and processed, before printing. Telephone directories, mailing labels and newspapers are examples. An appraisal of the costs show that the emphasis must not be on the pressroom but on the procedures ahead of it.

Seeks To Expand Gravure Research

A need to bolster the research program of the gravure industry and accomplishments of the current program were discussed at the annual meeting of Gravure Research, Inc. The meeting was held Oct. 19-20 at the Statler-Hilton hotel, New York City.

In his report to the members' meeting, Carl M. Metash, who was reelected president for his second term, compared the research program of the gravure industry with that of the lithographic industry. Metash stated that GRI has a research budget of $70,500 for 1959 and a projected research program which should pay high dividends. However, he added that the lithographic industry ". . . which is already making inroads into our commercial printing spends over four times as much."

"Can our multimillion dollar industry continue to spend only a fraction on research?" he asked.

In response to this question, a poll taken of management representatives present indicated a desire to increase the research program. A committee was appointed to investigate means of doing this.

Newly elected officers of Gravure Research, Inc., are left to right: Harry B. Smock, Chicago Rotoprint Co., Chicago, second vice president; and H. Raymond Corwin, Publication Corporation, first vice president; Carl M. Metash, Publications, Incorporated, president; Harvey F. George, Gravure Research, Inc., research director; and Martin J. Waters, Art Gravure Corp., secretary-treasurer—all of New York City.

The development of an electronic tension control device by the GRI laboratory was announced at the meeting of the Technical Advisory committee by Harvey F. George, research director. According to George, the control shows a significant reduction in paper waste and improvement in other press performance factors. He stated that arrangements for commercial development and manufacture of the control are being made through associate members and that provisions for licensing the control for use by members and non-members have been set up. The control was tested for six months on a high speed production rotogravure press in a member plant.

George also reported the results of tests made by the GRI laboratory on a magenta contact screen developed by Eastman Kodak Co. He said that the screen can be used to produce high quality hard dot gravure positives with a lateral dot formation.

A comprehensive research program in the areas of press and preparatory operations for the coming year was established.

Defines Research Activities at LTF

A definition of the aims of the Lithographic Technical Foundation was given by William H. Webber, executive director, at the Canadian Lithographers Convention which was held recently.

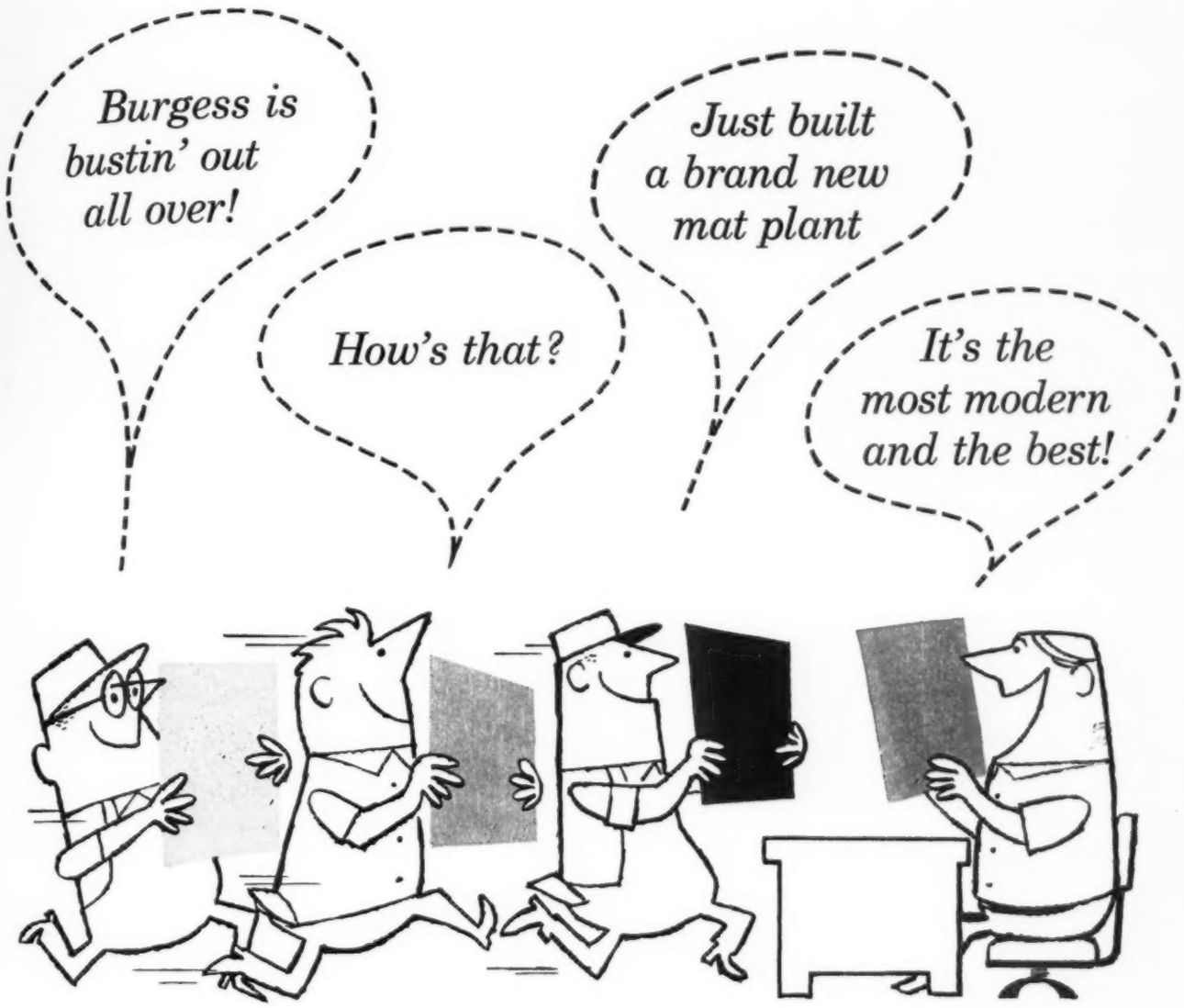
According to Webber, the research program at LTF is not intended to produce new products. He said: "LTF's research has been tending more and more to get down to the fundamentals of the lithographic process, the paper-ink-plate-blanket, etc. lithographic relationships and into various ways and means of better controlling the lithographic process and printing quality." Webber intimated that this was an area which was not covered by the research carried on by the suppliers, who were interested in a product which could be sold.

Much of the value of LTF's research is not apparent because its effects are felt in the form of products distributed by the suppliers; nevertheless, the contribution has been made. This was an important point to Webber's talk. He gave as an example, the non-blinding lacquers developed by LTF. The information was given to the suppliers prior to being released to the plants in an effort to have these lacquers available at the time the information was to be released.

Application of LTF research to other processes was another point stressed by Webber. The development of print quality test equipment is equally applicable to letterpress and gravure, he said.

Webber also indicated the printing industry is facing a challenge of utmost importance. He said, "We can look at some parts of the printing industry today and can see a creeping obsolescence which is already limiting the growth and will ultimately mean that some old processes will be completely displaced by new methods."

Because the industry is composed of numerous small plants which cannot sustain an organized research program, the research director said the most logical solution would be for them to contribute to organizations such as the LTF in order to participate in the advance of the industry. He added: "The most dangerous belief is that you can let this be the responsibility of others, let them pay for it and that you can sit by and share equally in the benefits." Webber indicated that LTF was planning to increase research activity 50% and as a result needed to boost its current budget of $200,000.



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Masking is Topic at Forum

Masking problems and techniques were the main topics of two lively color reproduction forums at the Spectra machine show held Sept. 6-12 in New York's Trade Show Bldg. Several of the nation's leading authorities on the subject were on the panels.

Panel members for both forums were: Lloyd E. Varden of Columbia University; Hans Neugebauer of Haloid Xerox, Inc.; Phillip E. Tobias, president of TAGA; J. A. C. Yule of Eastman Kodak Co.; Warren Reese of Macbeth Corporation; Vincent Hall of Time, Incorporated; Joseph H. Snyder, Color Corp. of America; F. L. Wurzburg, Interchemical Corporation, and Leonard Zoref, Kursham and Lance Color Service.

Masking is Necessary

Masking, defined by Yule as "a second image added to a first image in order to get an improvement from the results," and by Neugebauer as "being a way of correcting the density found between different colors," proved to be a subject of some disagreement. While there were definite feelings on both sides of the issues of when and how to mask it was the general consensus of opinion that masking was necessary—even if it might be considered a necessary evil.

Hall said that on *Life* magazine pages a constant set of masks was used which, if anything, might be called undermasking. He said fixed masks for all subjects had proven to him to be the soundest system for *Life*.

Hall's position was somewhat supported by Yule who said good masking improves a job but over masking, which is common, only adds complications and expense.

Dr. Neugebauer pointed out that masking does not destroy true color as many believe, but rather tends to protect original details. He said masking causes less hand work thus reducing danger of destroying the image. He qualified the statement by saying masking will not lead to perfect reproduction and that over masking could cause more harm than good.

Can't Produce 'True Color'

Producing true color is not possible today, stated Varden. He pointed out that the human eye can tell the difference between about 10 million different shades of colors while man is only able to produce a fraction of them.

Accuracy in color is highly over rated both because often it is difficult to find two people who will agree on what accurate color is, and also because customers often want something sharper than what is found in a transparency, said Snyder. Snyder demonstrated his point by placing similar pictures under different types of light showing how outside factors often "change" a color in spite of how careful a printer may have been in striving for perfection.

A visitor, Fred Wentzel, rose from the floor and suggested that color reproduction obviously was still an art that depended greatly upon the craftsman. He asked for more technical help from color experts aimed at the man who actually is working with color every day in the plant.

He stated that craftsmen are too busy producing color printing to have time to spend either on research or prolonged study. He felt that a better communication of ideas had to be established between the man in the research lab and the man on the job.

Members of one of the panels that discussed color reproduction problems at the Spectra machine show held Sept. 6-12 in New York are (left to right) Warren Reese, Macbeth Corporation; J. A. C. Yule, Eastman Kodak Co.; Panel Moderator Phillip E. Tobias, TAGA; Warren L. Rhodes, Rochester Institute of Technology; Lloyd E. Varden, Columbia University; Leonard Zoref, Kursham and Lange Color Sve.; Joseph H. Snyder, Color Corp. of America; and Herbert P. Pashel, Spectra technical director.

ROP Color

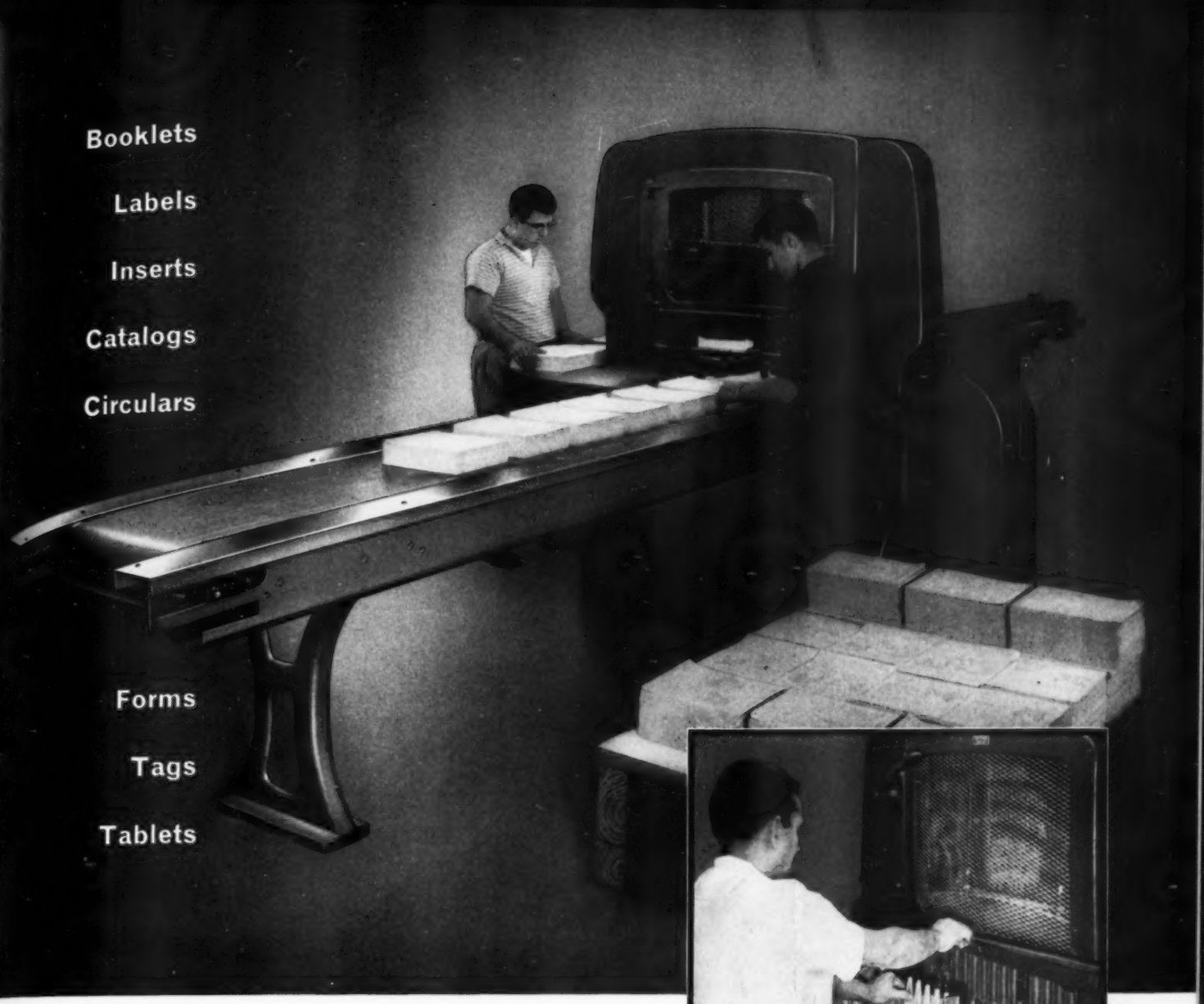
(Continued from Page 41)

ing a second ink. This second ink acted, to a degree, like a filter, modifying the undertone and shifting the hue in the direction of the top tone. For example, a cyan over yellow would absorb a little more of the red component, shifting the resulting green in the blue direction. Similarly, a yellow over cyan would absorb additional blue, implementing the red component, resulting in a more yellow green. However, when one prints a wet ink over another, as one does in ROP printing, this effect becomes minimized if it exists at all.

When two wet inks come in contact under printing pressures, there must be a high degree of mechanical mixing. From this point of view, it should not make any difference which ink is layed down first, provided the two inks are present in similar amounts. The crux of the problem is to control the ink film lay down.

Newsprint will split off over 70% of the ink from the first printer. Since the maximum amount that will be split off between any two inks is 50%, this means that the second ink down will be a minimum of 20% less the amount of the first ink down where overlay occurs. This fact alone would be sufficient to nullify any differences that might be caused by varying degrees of transparency. Incidentally, it is this variation in affinity existing between inks, and ink and paper that dictates the requirements for proper trapping. This also explains, in part, why that in order to obtain a maximum black, the ratio of the dot size of the three printers should be 70, 80 and 100 when printing in the conventional order.

Similarly, a variation in ink film thickness will produce a shift in hue. For example, magenta will



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shift towards blue as the ink film becomes thinner, and cyan will shift toward green, producing a variation in results when adequate ink control is not maintained.

Dirtying of Inks

Another negating influence that comes into play when an attempt is made to change an ink for an improved effect is that known as "greying" or "dirtying." We speak of an ink as being dirty if it has a noticeable amount of black or grey in it.

Paul J. Hartsuch of Lithographic Technical Foundation made an interesting study of the contributing factors of greyness when two process inks were mixed to give a third in-between shade. The essence of a portion of his work was that inks produced by mixing slightly different hues of the same shade would produce varying degrees of "dirtyness." One might shift to a different cyan because of increased transparency, but when mixed with the yellow, results in a less clean green than was originally attained.

We know that the color of the paper contributes significantly to the quality of the reproduction. When the shade is constantly varying, as it does in newsprint, a precise analysis of determining what each variable is contributing to the end result becomes difficult.

At this point some conclusions can be made. First, the method of newspaper printing determines within fairly close limits the type of ink that can be used. Although one might visualize that a far superior result might be obtained with a different ink, the problem is resolved by the fact that this particular ink can't be used on a newspaper press. With this limitation on the selection of inks and the fact that the change produced by varying the transparency is small, even under the best of conditions, it can be said that the problem of variation of ink transparency when applied to ROP printing can be ignored.

Trapping Order is Important

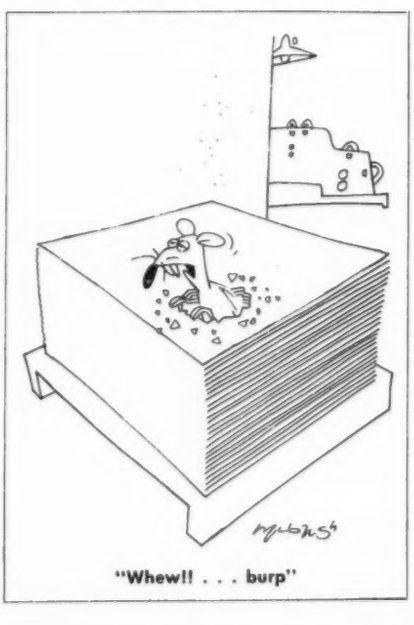
One can go another step and say that the order of printing of ROP color on newsprint will not make any significant difference in the result. The primary controlling factor in establishing the printing sequence is the trapping order of the inks. For example, if the cyan is printed down first followed by magenta and yellow, the yellow printer, with a more viscous ink, will pick some cyan and magenta off the web, dirtying the yellow printer.

A certain amount of this might be tolerated and there might be occasions when a production run would be simplified if the order of ink laydown was changed. However, the inks were tailored to be used in a prescribed way and generally that is the best way to use them. In this regard it would seem that adhering to certain basic ground rules would do more to improve and maintain the quality of ROP printing than numerous other maneuvers.

It was mentioned earlier that a combination of all three inks would give black. This may seem to be elementary, but it is a rule often ignored as shown by so many dull, dingy reproductions caused by excessive amounts of ink laid down by the secondary printers with oversized dots.

The method of printing and the paper used naturally limit the quality of the reproduction. So in this regard it would be well to use care in selecting subject matter that is simple in composition and permits the use of relatively large amounts of contrasting color.

What is fundamental to obtaining uniformty of ROP color is the general use of a basic set of process colors. The ANPA realized this when a few years ago they established with the advice of advertisers, publishers and ink manufacturers, the present set of ANPA-AAAA reference inks. This set includes the three process inks plus nine spot colors and an opaque white. In conjunction with this, a service laboratory was established permitting any publisher or manufacturer to have his inks compared with the reference inks in strength, hue and viscosity. Although more than 600 samples have been tested in the past two years, only 7% of the total number of newspapers using color have made use of this service.



"Whew!! . . . burp"

Personally, I would think every publisher would want to have his inks checked periodically if for no other reason than to assure himself that he is getting his money's worth. Although an ink is considered acceptable for ROP reproduction if the color strength does not vary more than ±10%, this does not mean that a full strength ink should not be received if that is what is being paid for.

Inks Deviate in Color

A conservative estimate made from the ink tests, shows that 40% of the inks deviate by 10% or more in color strength. While some of these are on the plus side, a majority are in the minus category. There are instances of inks being used that had been adjusted presumably to give superior results. After testing, however, the adjustment was found to have been downwards rather than upwards.

Another point of equal importance is that the number of variables are reduced by one. If one knows that the inks one is using are capable of giving good results and others are repeatedly achieving better work using the same set of inks, it is obvious that the fault lies in the reproduction operation and not in the inks.

It is only by the willingness and cooperation of the various newspapers to operate from the same basic reference point that the quality of ROP printing can be improved and its uniformity stabilized. Until this is done the growth of ROP color will be hampered by the prevailing attitude of some publishers and advertisers that it is too complex and unreliable to use.

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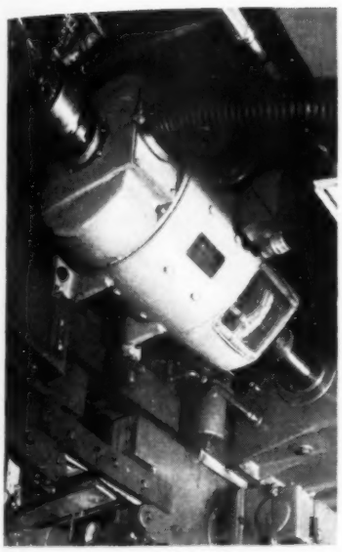

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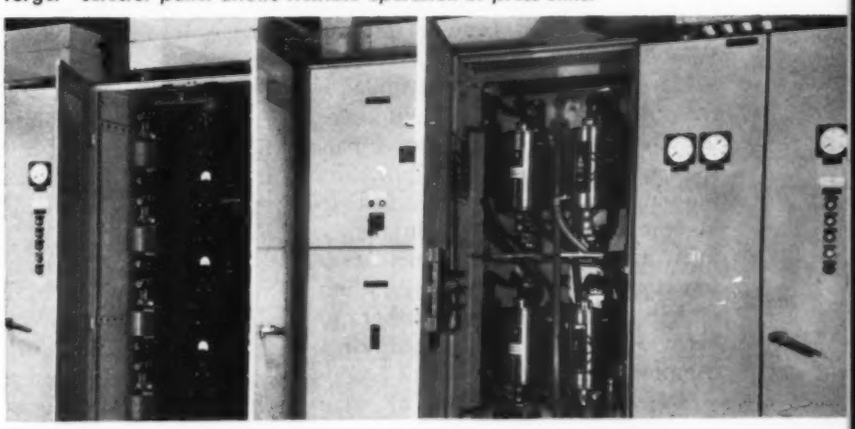

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GENERAL ELECTRIC

Examine New Processes

(Continued from Page 55)

Selection of personnel to operate the new machines was based upon ability, not seniority. Kuhn indicated he had no regrets from following such a policy. Paste make-up men were formerly hot metal ad compositors. Fotosetter operators were hot metal mixer-type ad machine operators. "No one has lost a situation due to the cold type method, but as retirements come up or a man quits, and we do not need them, we just don't replace them," Kuhn stated.

Proofs which were obtained from ad pasteups used to be a bottleneck, Kuhn revealed. However, a new machine developed by the Bruning Company will eliminate several intermediate steps now required. To be known as an opaque copying machine, it is said to make same size, opaque positive copies by the use of prisms and electrostatically charged paper. This machine is supposed to make seven to eight page size proofs per minute, which Kuhn reported as being a considerable gain over present methods.

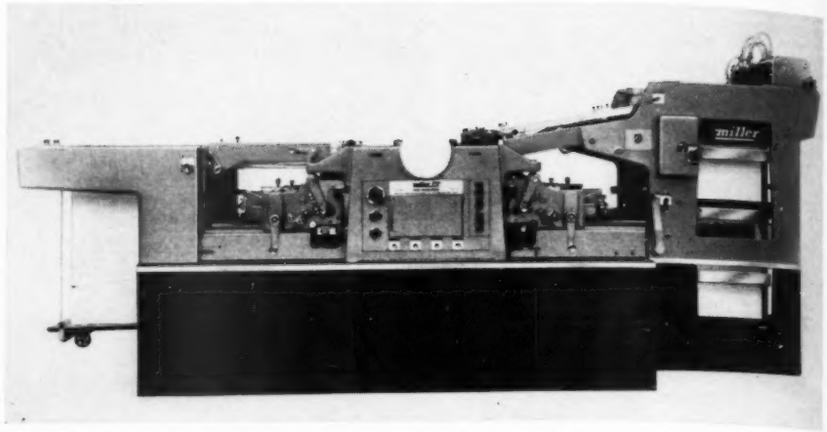
Kuhn concluded his remarks with a warning to management not to expect new methods to be an overnight success. ". . . it takes time and patience to develop and realize profits from new and unproven methods," he said.

An Overnight Change

At the Arlington (Va.) *Northern Virginia Sun* the changeover from hot to cold methods came overnight. This was learned from a talk by Wm. Eldredge, production manager.

He impressed on the audience that the key to efficient changeover was the selection of the proper personnel. At Eldredge's plant, the individuals who were destined to become the operators, maintenance men and pasteup personnel were sent to training school for varying periods of time in order for them to become familiar with the Photon composition machine.

Production was started as soon as the machine was installed. He reported production jumped with the green crew from 1900 column inches for the first week to 4400 inches for the fifth week.



The Miller TW two color 21 in. by 28 in. letterpress is described as having a maximum speed rating of 4600 sheets or 9200 color i.p.h.

Two 21 by 28 in. Letterpresses Added to Miller Press Line

At the Graphic Arts Exposition held in New York City, Miller Printing Machinery Co. introduced two new letterpresses, the Miller SW single color and Miller TW two color 21 in. by 28 in. models.

A speed rating of 5000 i.p.h. is claimed for the Miller SW and of 4600 sheets or 9200 color i.p.h. for the Miller TW. Among other features of these presses are: the Miller stream feeder with a reloading type motorized high pile, counter-balanced feedboard which can be raised with one hand, and a positive registration system.

Press is also equipped with: rotary mill-type inker, stepless delivery tape speed adjustment, adjustable air blow-down over tapes, motorized high pile delivery with alternating jogger action, press drive by silent type chain with stepless speed adjustment, and combination constant and intermittent force-feed automatic lubrication.

Bank Stationers Study Check Automation

A group of 145 representatives of bank stationery printing companies attended a meeting of the Bank Stationers' Section of the Lithographers & Printers National Assoc. held in New York City during the Graphic Arts Exposition. Conference chairman was Edward A. Robinson, general manager, J. C. Hall Co., Pawtucket, R. I.

The Bank Stationers' Section, recognized by the American Bankers Assoc. as an authoritative organization in the check imprinting industry, discussed most recent developments in check automation in the banking industry.

A report on *Check Evaluating Systems* was given by E. D. Spina, Research and Development Dept., IBM Corporation, Poughkeepsie, N. Y. Spina outlined a method for evaluating and upgrading checks produced under what is known as System 001. Twelve specifications in common language printing are used as a basis for rating batches of checks. He warned that no system could be foolproof, but this one was calculated to help determine the quality and readability of the mechanized checks.

According to Donald R. Macaulay, president, Paper and Printing Quality Div. of Paper Quality Control, Chappaqua, N. Y., the application of statistical principles has been going on in the Graphic Arts for 10 years. In a report entitled, *The Application of Statistical Quality Control to Check Encoding*, Macaulay underlined the importance of statistical quality control in magnetic ink printing. He noted that the bank stationers had isolated quality control developments by discovering: the need for measurement, the use of instrumentation; agreeing on terminology; and pursuing the search for tolerances.

Commending the bank stationers on their progress in controlling quality up to the present, Macaulay told them they must start thinking like engineers and urged them to set up and arrange a statistical section.

Women in the Graphic Arts

(Continued from Page 39)

Washington, D. C. She joined National Publishing in 1953 after spending several years with the U. S. Dept. of Labor. She holds a B.S. in Business Administration and a M.A. in Labor Economics. At present, she is in charge of contract negotiations with 10 unions, arbitration of grievances, screening and training of new employees, and general maintenance of good personnel relations.

Production manager of two New York companies is Joan J. De Mario. She is production manager of the Galaxy Publishing Corp., and of the Guinn Company, Inc. Her duties as production manager of Galaxy consist of traffic and correlation between the editors, art directors and printers, as well as the purchasing of paper, plates, type and printing for several publications.

Runs Graphic Arts Gauntlet

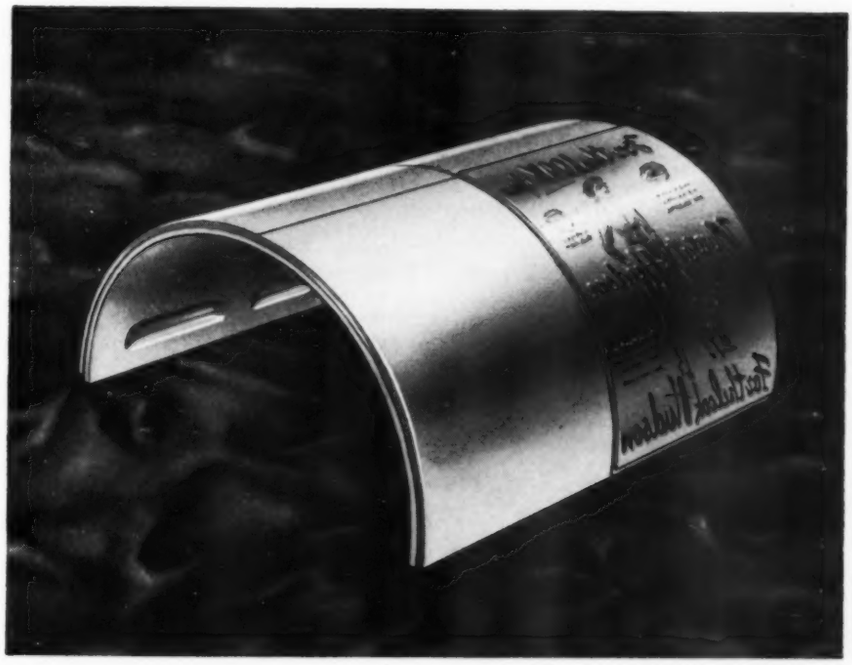
As production manager of Guinn, her work includes running the entire gauntlet of the Graphic Arts. Her company produces point of purchase material, advertising pieces, magazines, paper back and edition bound books. She is also administrative assistant to the publisher. She has designed many printed pieces, the most recent one being the cover from a paper back book entitled 31 *Short Short Stories from Colliers*. At present she is treasurer, Club of Printing Women of New York, and a member of The Productioneers.

Doris Hall, another woman executive, is the assistant executive secretary of the Graphic Arts Assoc., Washington, D. C. Mrs. Hall accepted her present position in 1951 after serving as assistant director of industrial relations, Union Employers Section, Printing Industry of America. She is a member of the Washington Trade Assoc. Executives, the American Society of Assoc. Executives, the Graphic Arts Assoc. Executives and the Industrial Relations Research Assoc.

There are many other women who are making considerable contributions to the growth of the Graphic Arts industry. Among them are: Beatrice Warde, Lanston Monotype Co., London, England; Annie L. Green, Guide-Kalkhoff-Burr, Inc., New York; Marie Kaye, Consolidated Lithographing Co., New York; Mrs. Porter Wylie, Marchbanks Press, New York; Helen Gentry, Holliday House, New York; Margaret B. Evans, Charles Scribner's Sons, New York; and Mary Alexander, University of Chicago Press, Chicago.

Both Carnegie Institute's School of Printing Management and Rochester Institute's Printing Department report they have several women enrolled in their full four-year programs leading to B.S. degrees in Printing Management. It would come as no surprise to learn from the approx. 20 other colleges throughout the country, offering this type of program, that they also have women enrolled.

The story of women in the Graphic Arts industry is a long, varied and proud story. That it will continue in this tradition, with more and more women choosing the Graphic Arts industry as their career is inevitable, for there is a need for such talented women.



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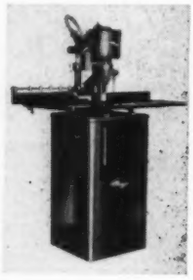
If you wish additional information concerning equipment, supplies, and/or technical literature, please make your request on *Printing Production's* Reader Service Card to be found in this issue.

TWO PAPER DRILLING MACHINES

Two paper drilling machines designed for small shop or duplicator operations have been announced by the Challenge Machinery Co. Each model drills up to 2 in. of stock at a time and will handle cornering, slitting, and slotting by means of attachments. One, the Model CA, is a hand operated bench type drill. The other, Model CF, is a foot operated stand type drill. Work table size of each model is 19½ in. by 31½ in. Circle No. 263 on Reader Service Card.



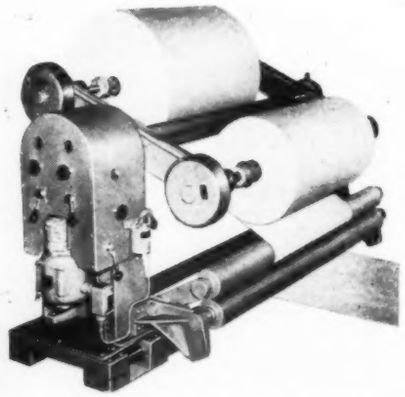
QUOIN KEY FOR UNIFORM LOCKUP

American Wood Type Mfg. Co. has introduced the Clicktite quoin key, said to insure exact and uniform lockup of type forms. It is designed for use with Hi-speed, Wickersham, Hemple No. 1 and 2 quoins. The key is equipped with a spring-loaded dog-clutch drive which reportedly allows all quoins to be tightened to a uniform, predetermined tension of 650 lbs. pressure. It is claimed that turning the key beyond the pre-set point has no effect on the quoin as the key handle then clicks harmlessly around the shaft. The key is also said to resist breakage and stripping. Circle No. 250 on Reader Service Card.

UNWIND, REWIND STANDS, HELP SPEED UP ROLL CHANGES

Turret-type unwind and rewind stands have been developed by Stanford Engineering Co. to speed up roll changes in webfed printing and converting operations on paper, plastic films, foils and other materials.

Model TO-24 unwind stand (shown) has two rolls of stock mounted on tandem shafts in a rotatable turret. Second roll rotates on turret, splicing into the moving web when the first roll is finished.



Model TO-24R rewind stand has a turret with dual wind-up shafts which rotate when desired cut-off point has been reached. Turret action attaches the moving web to a fresh core. Both models are adjustable to any web length, have automatic cut-off knives, power driven turnover and air chuck. Circle No. 284 on Reader Service Card.

WASH FOR RUBBER PLATES

A non-flammable, non-toxic preparation for cleaning and conditioning rubber printing plates has been introduced by Mosstype Corporation. According to the manufacturer, the wash facilitates the removal of fresh and dry caked ink, finger marks, and grease spots while it improves the ink receptivity of the plate's surface. Described as safe to natural and synthetic rubber as well as stickyback, the preparation is supplied in concentrated powder form for mixing with tap water. Circle No. 268 on Reader Service Card.

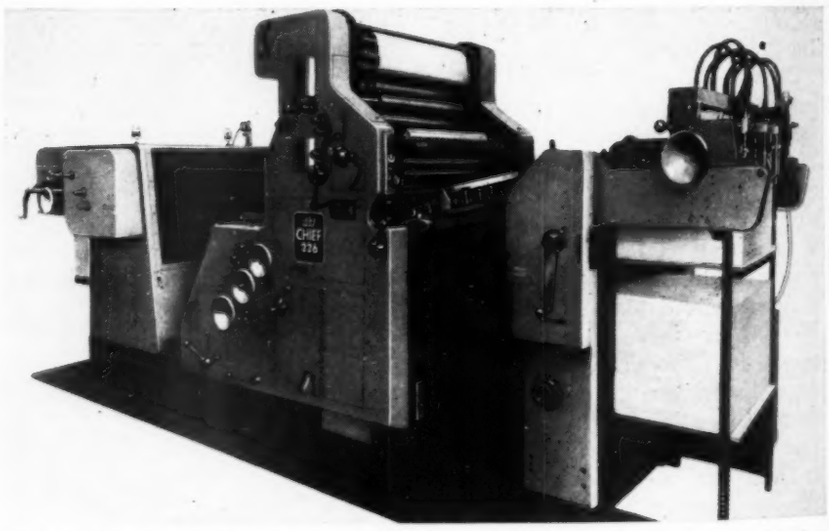
BRITISH S1 PROOF PRESS

The British S1 proof press has been introduced by the American Wood Type Mfg. Co. The press is said to have vibration-free operation and features a 4 in. diam. impression roller, adjustable side guides and paper grippers, which are foot operated, leaving both hands free. Inking is done by two geared, self-inking rollers with a reciprocating over-rider. The rubber impression roller reportedly does not require covering with tympan. Bed size is 15 in. by 26 in.; maximum sheet size is 14½ in. by 26 in. Circle No. 270 on Reader Service Card.

STORAGE CHEST AND WASHUP RACK COMBINED FOR MULTILITH ROLLERS

A combination storage chest and washup rack for Multilith rollers has been announced by Lith-O-Roll Company. Made of hardwood, the chest is designed to hold a complete set of rubber rollers for Multilith presses, including six ink rollers, two water rollers and a lower feed roller. The chest may be stored on a table or shelf or hung on a wall.

Chest is equipped with a hinged lid and cabinet clasp for opening and closing and it is said rollers can be easily removed when needed. According to sponsor, maximum protection is provided for rollers when not in use on the press or when ink rollers are being cleaned. Circle No. 285 on Reader Service Card.



Two Color Offset Press—The Chief 226, a two color sheetfed offset press, introduced at the Graphic Arts Exposition, is now being manufactured by American Type Founders Co. The press is said to operate at speeds up to 8500 sheets per hr., with a maximum printing area of 19⅝ in. by 24½ in. Circle No. 252 on Reader Service Card.

PUNCHING AND BINDING UNITS FOR PLASTIC BOUND MATERIAL

Plastic Binding Corp. has developed a punching unit and a binding unit which together can be used for plastic binding of catalogs, booklets, manuals, etc. The Model 27 power punching machine is said to handle sheets or covers up to 12 in. long. The unit measures 20 in. by 19 in. and is operated by an electric foot pedal. Another feature of the unit is the double shearing action of the punching dies. The Model 27 binding machine, with 12 in. of binding area, is foot-pedal operated and is said to have interchangeable binding pins. Binder can handle books up to 1¼ in. thick. Circle No. 253 on Reader Service Card.

HOLLOW DRILLS FOR PLASTIC FILM

Pioneer-Toledo Corporation has introduced its line of hollow drills for use in plastic films. It is claimed the design of the drill was modified to produce loose crimped chips and thus prevent clogging caused by the breakdown and solidifying of plastic chips. Circle No. 298 on Reader Service Card.

PHOTOGRAPHIC PAPER MASTERS INTRODUCED BY KODAK

A system has been devised by Eastman Kodak Co. in which paper masters can be exposed photographically and run on offset duplicating equipment. Termed the Ektalith method, the system utilizes standard copy cameras. Kodak claims that

within 2 min. a master can be produced from practically any type of original, enlarged or reduced as desired. Corrections can be made with a moist eraser or ink eradicator, it was stated.

The first step in processing these paper masters is to expose the original to a sheet of Ektalith transfer paper. The sheet is then processed, the final step being to transfer the photo image to the paper master. Plate life up to 2000 copies is claimed.

Equipment for the new process includes processors for room light use as well as those for darkroom use. Shown in the picture is the Ektalith loader processor Model 1, designed for use under room light. This equipment, however, is not to be available until Jan. 1960. Circle No. 274 on Reader Service Card.

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SINGLE HAIRLINE RULE MOLD

A twin 2 pt. hairline rule mold and slide for use on Universal strip casters has been announced by Universal Mono-Tabular Corp. The company claims that uniform temperatures can be maintained on both electric and gas casters using the single rule mold. Circle No. 297 on Reader Service Card.

MYLAR FILM AIDS OUTLINING FOR ENGRAVING AND LITHO WORK

Available from Printing Arts Research Laboratories is a new art medium for photoengravers and lithographers designed to simplify outlining photographs or other art work. The film is called Fluoro dropout film and is a blue coated transparent sheet of mylar film.

The film is taped over the photograph or other art work to be outlined, the sheet dampened slightly, and then scraped with any sharp instrument. The blue coating is removed through the scraping action leaving clear transparent areas on

the film. Because the subject matter is always visible through the blue coating, costly mistakes are diminished, and outlining is facilitated.

Corrections can be made with the use of transparent patching color, it was stated. Where thin lines are desired, the Fluoro dropout film can be scribed, without dampening the film, with ordinary scratchboard tools. Another advantage claimed by the manufacturer is the protection afforded to airbrushed photographs while being outlined. Reproduction is not affected in the blue coated areas by grease, fingerprints, etc., since blue photographs as white with color-blind materials. Circle No. 261 on Reader Service Card.

TEST SIGNAL STRENGTH OF MAGNETIC PRINTING INK

A compact tester for showing the signal strength of magnetic inks has been developed by Kidder Press Co., Inc. To be used in bank check sorting systems for the checking of printed magnetic characters, the machine scans a line of characters passing under its sensing head.

The strength of the signal is indicated on a meter having a color code. The red portion of the scale indicates that the properties are over or under the accepted standard. The green section of the meter scale indicates that the strength is acceptable.

An oscilloscope may be used in conjunction with the tester for a continuous display of signal strength and the detailed checking of individual characters. It is said to be compatible with the specifications of the ABA Technical Committee on Mechanization of Check Handling, Bank Management Commission. Circle No. 264 on Reader Service Card.

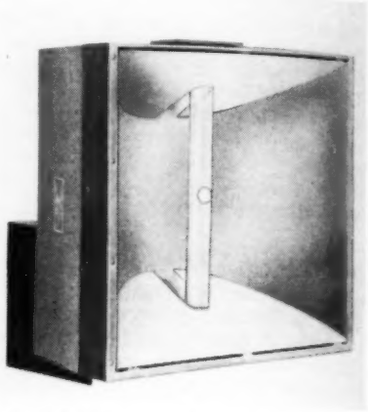
INK AVAILABLE IN CARTRIDGES FOR SMALL OFFSET PRESSES

One pound cartridges of black and eleven offset ink colors have been made available by Davidson Corporation. The inks are said to be easy to use because no knife is required to transfer the ink from can to ink fountain, it is discharged in a bead from the cartridge. Manufacturer states there is no waste from skimming which can result from using ink from a previously opened can. Circle No. 272 on Reader Service Card.

Dycril Platemaking Equipment—Robertson Photo-Mechanix, Inc. has announced a new line of equipment designed to produce the Du Pont Dycril photopolymer printing plate. This equipment is to be available either as single pieces or as complete integrated units. Equipment is to include cameras, rotary and flat printing frames, rotary and flat washers, conditioning tables, stripping tables, and sinks. Shown in the accompanying picture is the Robertson rotary vacuum printing frame (left) and the flat plate washer (right). Circle No. 265 on Reader Service Card.

XENON LIGHTS OFFERED BY MACBETH

A line of Xenon lights for the Graphic Arts has been introduced by Macbeth Arc Lamp Co. The lights utilize the pulsed Xenon lamp developed by General Electric Co. Constant intensity and color temperature throughout exposure and a



balanced spectrum for color separation work are among the claims made for the lights. Models are available in 1000 w., 2000 w., and 3000 w. sizes for printing, camera and other applications. Circle No. 281 on Reader Service Card.

HIGH-SPEED MIXED COMPOSITION HANDLED BY MODEL 29 LINOTYPE

A Linotype machine that automatically sets mixed sizes and faces of type at high speeds has been introduced by Mergenthaler Linotype Co. Known as the Mixer Model 29, the machine is tape-operated, eliminating the necessity of setting mixed type on two machines and then collating the two sets by hand. Among the features of the Model 29 are the automatic knife block, the TTS mixing device and the automatic Hydraquadder.

Using the setting of a classified ad as an example, manufacturer describes the operation of the machine as follows:

The Model 29 sets the agate lines and the knife trims the slugs. The overhanging display line is set, and the tape opens the knife block so that the overhang remains full depth. Then a blank agate slug is cast and trimmed for underpinning. No change of molds or liners is necessary. The electric Hydraquadder quads left, right, or center according to the commands of the tape.

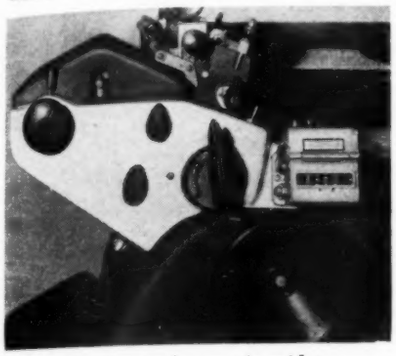
In addition to its use in composition requiring two different fonts, the Model 29 is said to eliminate hand insertion of accents and special characters. This can be done by keyboarding and at high speed. Circle No. 260 on Reader Card.

ADHESIVE TAPE IN SHORTER ROLLS

Kleen-Stik Products, Inc., has added a 36 yd. roll of two-sided adhesive tape to its line of pressure sensitive adhesive products. The tape has bond adhesive on both sides; one side is covered with protective backing paper. Available in widths of ½ in., ¾ in., and 1 in., the new length comes in dispenser packages or bulk rolls. Circle No. 256 on Reader Service Card.

CONTROL SYSTEM TO AUTOMATE SMALL SIZE OFFSET PRESSES

A system which reportedly makes duplicators and small size offset presses automatic is being distributed by American Type Founders Co., Inc. The Program-Matic control system, which consists of



a count-down attachment, is said to combine various press or duplicator operations in a desired sequence.

According to the company, one knob operation for the single plate cylinder allows the operator full press control. The Magic Memory counter stops the press automatically when the desired number of copies has been reached; and the press may be stopped at any time for cleaning, to add paper, etc., without interrupting the counter's record. The balance of the run is indicated on the counter; the total sheet count is accumulated in the regular press counter. The press may be run independently from the Program-Matic.

Another feature of the system is the override control, which is said to permit alternate sheet feeding on long stock or jobs requiring heavy ink coverage. The override control also permits extra copies without changing count; and when released, the switch resumes automatic control. Circle No. 276 on Reader Service Card.

DEVELOPS 12 POWER MAGNIFIER FOR ELECTRONIC BANK CHECK PRINTERS

This 12X magnifier with a wide, flat field, has been developed by Edmund Scientific Co. for printers who want to

check faults in magnetic ink printing used in mechanized check processing.

Magnifier is used to magnify a reticule or pattern etched on glass. Through reticule it is possible to observe such factors as coverage, voids, extraneous inks, and faults on characters of E 13/B magnetic type faces. These faults may cause noises in the electronic reader and possible mechanical problems. Circle No. 286 on Reader Service Card.

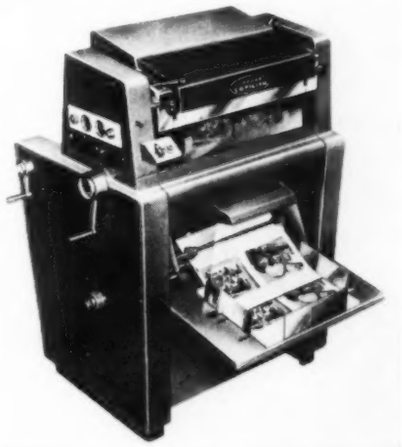
NEW 12 X 15" CLYDESDALE CAMERA

Process Cameras & Equipment, Inc., announces the addition of a 12 in. by 15 in. camera to its Clydesdale camera line. Designed similarly to the 17 in. by 17 in. camera, the new unit occupies a floor space of 20 in. by 72 in. Range of enlargement with 10½ in. lens is said to be three times; reduction, four times. Circle No. 277 on Reader Service Chart.

SMALL OFFSET PRESS LINE

The Copease Corporation has announced plans to market a series of offset duplicating presses. Produced in Europe in accordance with specifications supplied by the Copease firm, the presses will range in size from 9 in. by 14 in. to 17 in. by 22 in.

The Copilith Senior (illustrated) utilizes attachments for simultaneous num-



bering, perforating or slitting during printing. Specifications of the Senior include a maximum sheet size of 14 in. by 20 in. with a printing area of 13 in. by 17 in. Speed is said to be 5000 i.p.h. and floor space is 3 ft., 5 in. by 3 ft., 7 in.

A clamp for fast plate attachment and a method of inking and dampening with the same form roller are among the features mentioned by the manufacturer. Circle No. 282 on Reader Service Card.

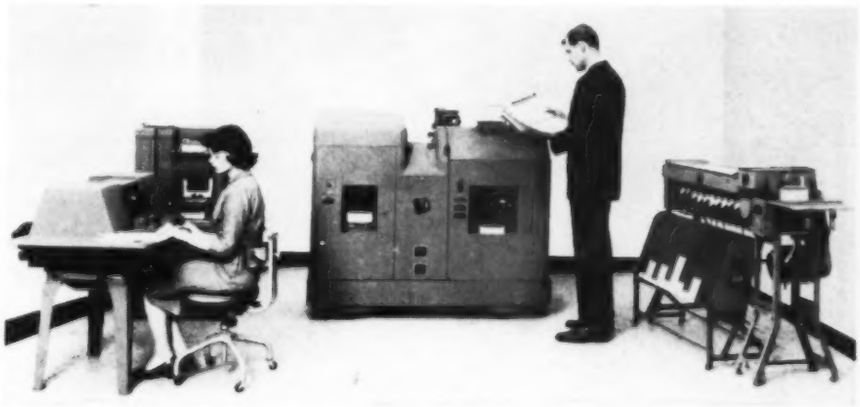
Paper Press Wipers—Scott Paper Co. reports its Perf-embossed paper wipers may be used for cleaning printing presses. Wipers are said to be lint-free and will not shed deposits which could clog ink during printing operations. Circle No. 299 on Reader Service Card.

24 IN. VERTICAL LITHO CAMERA EQUIPPED WITH WIDE ANGLE LENS

A 24 in. vertical camera designed primarily for the lithographic field has been announced by M. P. Goodkin Co. The unit is equipped with a wide angle lens which can make enlargements and reductions to 233%.

Lights move with the copy and are adjustable to 360 deg. According to sponsor, no calculations are necessary to compensate for lighting, nor is it necessary for the operator to adjust the lights for every exposure. The calibration system is directly gear driven, which is said to result in instantaneous reaction on the copyboard and lens, as well as from the hand wheel, counter and platform.

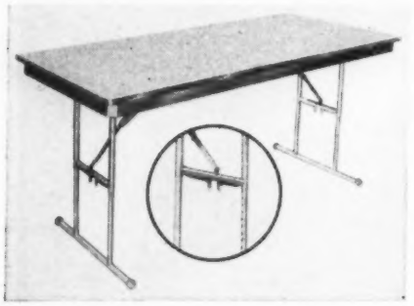
Also part of the standard equipment is a self-focusing vacuum back equipped with adjustments for various film sizes. The camera occupies a floor space of 28 in. by 60 in. Circle No. 273 on Reader Service Card.



Punched Card Processing—A new system of punched card data processing specially designed for small businesses has been announced by Remington Rand Univac Div., Sperry Rand Corp. Sponsor states system makes it possible for small companies to machine process such accounting work as production control and inventory control. It consists of four basic pieces of equipment: the alphabetical punch, sorter, alphabetical tabulator and summary punch, and reproducing punch. The system operates at a speed of 60 cards per min., and can be adjusted to perform faster, reports Remington Rand. Circle No. 287 on Reader Service Card.

ADJUSTABLE HEIGHT FOLDING TABLE

Foldcraft Company has introduced a folding table which can be adjusted from 30 in. to 40 in. height at 1 in. intervals,



and is suitable for a wide variety of uses in binderies, mailing rooms and other printing plant departments.

The table is made of 18 ga. tubular steel, welded and riveted at points of stress. It is equipped with a spring-operated manual control for raising and lowering, and has locking toggles in the folding leg mechanism.

Tables are available in a choice of surface: ¾ in. unfinished fir plywood, sanded and ready for finishing; 1 in. Weytex hardboard with honeycomb core; and Marlite, a tempered hardboard, with a Marlite plastic surface in a natural birch woodgrain pattern. Circle No. 288 on Reader Service Card.

NEW STEEL USED IN PAPER KNIFE

Simonds Saw and Steel Co. announces the development of a knife for paper trimmers made of a new-type steel. The steel used in this Si-Namic knife is said to contain more edge-holding alloy for longer knife-sharpness. Manufacturer also claims the knife is designed to eliminate drag and reduce paper dust in the cutting operation. Circle No. 289 on Reader Service Card.

PAPER CUTTER AND TRIMMER

A 32 in. combination paper cutter and trimmer available in both table and floor models has been announced by Michael

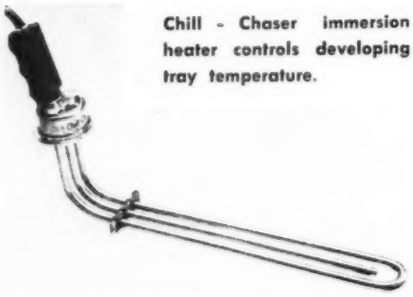
Lith Sales Corp. Called Kutrimmer, it is claimed to cut up to 50 sheets in one operation, and cut heavy board. Unit is equipped with a hand clamp or foot treadle for cutting of special material. Also included is a measuring device for multiple cuts. Circle No. 290 on Reader Service Card.

DEVELOPS THREE DUPLICATOR INKS

The development of three duplicator inks has been announced by the Colitho Div. of Columbia Ribbon and Carbon Mfg. Co. One is described as a magnetic ink for use with high speed data processing techniques reportedly applicable to the new check interpreting systems. Another is a black proof press preprint ink for preprinting direct image paper plates on proof press equipment from type set composition. This ink is said to dry instantly. The third is a black dual-purpose offset and letterpress preprint ink, which is described as a quick dry black ink to be used on all types of lithographic and letterpress equipment. In addition, this ink is said to be usable as a regular duplicator ink where it is necessary to make a master from another master. Circle No. 300 on Reader Service Card.

TEMPERATURE CONTROL HEATER FOR DEVELOPING TRAYS

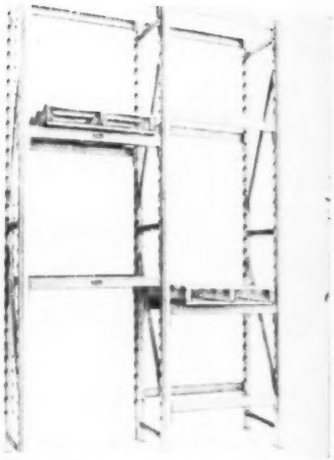
Still-Man Equipment Corp., manufacturers of the Chill-Chaser electric immersion heater for developing tanks, announces the development of a new tray



Chill - Chaser immersion heater controls developing tray temperature.

temperature control heater. Thermostatically controlled, this portable unit is said to maintain a temperature within one deg. of the temperature required. After raising the temperature, the unit is claimed to operate only when the liquid temperature drops ½ deg. F.

Insulated and reportedly acid-resistant. this heater may be plugged into any 115 volt a.c. outlet. A safety circuit breaker prevents operation when the unit is not in liquid. This Chill-Chaser may also be used as a stirring rod; thermoplastic handles are provided for this purpose. Circle No. 291 on Reader Service Card.



New Boltless Rack—A boltless rack, called the Hartman Triple Wedge Boltless rack, has been developed by Hartman Metal Fabricators. Rack can be assembled by engaging support beams in connector holes in uprights and driving into wedged position. Each shelf connection wedges vertically, front to back and side to side. Rack can be height adjusted by driving beam out and re-locating on 4 in. centers, and is available for any load capacity, height, depth or span. Circle No. 292 on Reader Service Card.

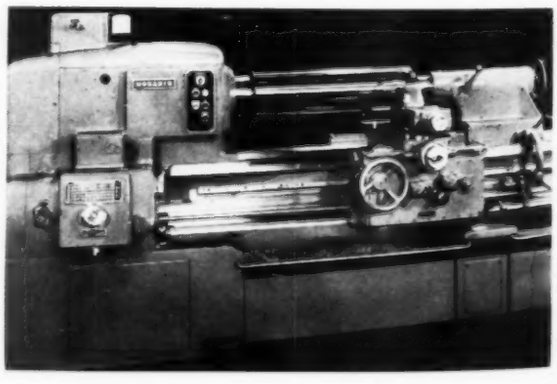
MECHANICALLY GRAINED OFFSET PLATE INTRODUCED BY POLYCHROME

A mechanically grained, sensitized aluminum offset plate has been developed by Polychrome Corporation. Called Granekote, it is designed to expose on one plate: halftones, solids, reverses and fine line copy. According to manufacturer, plate holds a retentive grip because of its grained structure and holds sufficient ink and water for good printing results. Processing of Granekote is said to be the same as that for chemically-etched and smooth sensitized plates. Circle No. 293 on Reader Service Card.

MONARCH ROTOGRAVURE LATHE FEATURES VARIABLE SPEED DRIVE

A new rotogravure lathe, designed to turn cylinders to a 6 microinch finish at surface speeds claimed above 2000 s.f.p.m., has been announced by Monarch Machine Tool Co. Lathe is claimed to turn up to 16 in. rolls, copper plated, weighing up to 1000 lbs. and turn and polish sets of cylinders in one operation.

Turning with a diamond tool, taper is held over the length of roll to within 0.00025 in. and concentricity is held to



The Monarch Series 62 Rotogravure Lathe designed to turn cylinders to a 6 microinch finish, holds taper over the length of the roll to within 0.00025 in.

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Blue Ribbon UC Mat

Sensitive base and coating tough enough to withstand pull of undercut halftone dots render this mat a good choice for general newspaper campaign purposes. Can be used for vacuum casting of curved newspaper plates.

Blue Ribbon CC Mat

Primarily for curved page casts. Strong base and coating fit this mat for multiple casting in autoplate. As many as 25 casts have been made without impairment.

Blue Ribbon Regular Mat

Sensitive base and coating adapt this mat to utmost fidelity in reproducing copper, zinc or plastic plates.

Blue Ribbon BC Mats

Soft base with stronger facing to combat undercut halftone dots.

Blue Ribbon UCR Mats

Specially developed for conditions where undercutting is frequent.

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For dependable stereotyping, rely on Certified Dry Mats

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BLUE RIBBON MATS

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less than 0.0005 in., states sponsor. Adjustment of the tool can be made in increments of 0.0001 in. through a dial indicator on the bottom slide.

The lathe is equipped with a standard carriage, apron with four-way power traverse, and has 25 in. swing over the bedways and 16 in. swing over the carriage. A center distance of 72 in. is adequate for most rotogravure cylinder work. Circle No. 294 on Reader Service Card.

ALUMINUM OFFSET PRINTING PLATE PREPARED IN ONE MINUTE

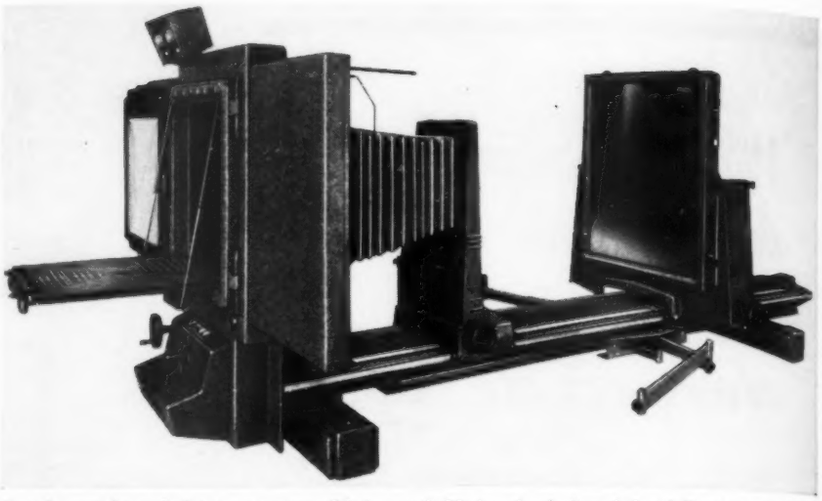
An aluminum plate for small size duplicating presses has been introduced by Gevaert Co. of America. Known as the Gevacopy Rapid aluminum offset plate, the plate is processed by first reducing

or enlarging copy to obtain a negative. The negative and aluminum plate are then passed through a developing machine. As the machine automatically draws negative and plate through the developer, the exposed silver salts of the negative change into black metallic silver. The unexposed salts remain colorless and are transferred to the plate, where they are developed. The plate is rubbed with a fixing solution, making it ready for offset printing. According to the manufacturer, the process requires less than one minute. The plate is available in three sizes—10 in. by 16 in., 10 in. by 15⅜ in., and 10 in. by 15 in. Circle No. 275 on Reader Service Card.

NEW TRANSPARENT STRIPPING FILM ANNOUNCED BY EASTMAN KODAK

A new high contrast photomechanical emulsion has been applied to a thin stripping base according to Eastman Kodak Co. Called Kodalith transparent stripping film Type 3, the emulsion may be stripped from its base either wet or dry which aids in the registration of separation negatives.

Kodak indicates that this film is suited to the photoengraver where durability is needed because of handling reversal, combination, and insert work. The emulsion is said to have a wide latitude in both exposure and development and is capable of reproducing the entire tone scale. The company also claims that the development tolerance ranges from −2 to +4 min. for under and over exposed negatives. Circle No. 283 on Reader Service Card.



The Commodore darkroom camera, 24 in. and 31 in., is designed for full color and black and white reproduction and is manufactured by W. A. Brown Mfg. Co.

24 IN. AND 31 IN. CAMERAS FOR COLOR AND BLACK AND WHITE

The development of 24 in. by 24 in. and 31 in. by 31 in. Commodore all-metal darkroom cameras has been announced by W. A. Brown Mfg. Co. The Commodore series is designed for full color or black and white reproduction. Some standard features include: tri-rail track; Goerz Artar Red Dot lens; motorized vertical and horizontal lensboard movements; gallery and darkroom operating controls; positive locking mechanism; and 34 in. by 44 in. cast aluminum glass covered copyboard. Circle No. 267 on Reader Service Card.

PHOTOLETTERING MACHINE OFFERS 14 to 96 PT. DISPLAY TYPE RANGE

A photolettering machine for producing display type in sizes ranging from 14 pt. to 96 pt. has been introduced by StripPrinter, Incorporated. Called the StripPrinter, the unit makes it possible to produce display type on 35 mm photo paper from film strip alphabets which are passed through the machine and exposed one letter after another in the desired type. Type fonts are made on a common base line so that type faces and sizes may be mixed in the same line.

Most common type faces are said to be

available; handlettering and fancy designs are also offered. The alphabet films contain all the lower case, caps, points, and figures, with the exception of some of the larger faces which contain only caps, points and figures. Lines may be produced on film or paper, positive or reverse. No darkroom is necessary. Circle No. 262 on Reader Service Card.

PORTABLE SKID TURNER

The Woodward Research Co. has recently produced a portable, motorized skid turner for inverting skids of paper for back-up printing. The machine is adjustable for any size load from 28 in.

by 38 in. to 52 in. by 76 in. and is said to turn a 5000 lb. skid of paper completely over in 55 sec., its complete operating cycle. The machine, designated the Model HP, will handle pile heights ranging from 22 in. to 74 in. The manufacturer states that the skid is supported at all times without any squeeze exerted on the stock, thus eliminating offset. The skid turner also can be used as a lift table when not turning skids. Other specifications indicate that the length is 96 in., the width is 60 in. and the height, 96 in. Circle No. 271 on Reader Service Card.

INK ROLLS FOR DUPLICATORS EQUIPPED WITH NYLON BEARINGS

Chicago Manifold Products Co. has announced its Syn-Tac ink rolls equipped with nylon bearings for duplicating equipment. The bearings are reported to roll smooth, eliminate shaft scoring, and keep production flow steady. It is stated bearings never need oil or grease, and also eliminate grease damage to printed sheets. Circle No. 295 on Reader Service Card.

HEATED STEREO MAT CABINET

American Publishers Supply, Inc., has developed a cabinet designed to store live full page stereotype mats at casting temperature. Called the Electro Wall-File Cabinet, the unit provides heat over the entire wall surface. It is claimed that heat can circulate between each mat and that uniform temperature is insured by thermostatic control. The cabinet is 5 ft., 3 in. by 36 in. by 24 in. There is storage room in 48 separate sections for up to 240 mats. Circle No. 254 on Reader Service Card.

LIGHTWEIGHT MAGNESIUM FURNITURE

A lightweight metal furniture for lockup of type forms, called Trulite, has been announced by Challenge Machinery Co.

Made of magnesium, the furniture is available in sizes ranging from 2 to 10 ems in width and from 4 to 70 ems in length and comes in four fonts. It is ¼ the weight of iron. Circle No. 279 on Reader Service Card.

FLEXOGRAPHIC WEBFED PRESSES WITH NEW HOT AIR DRYING SYSTEMS

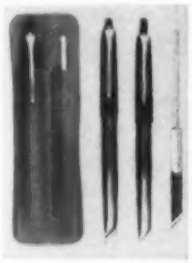
Lee flexographic webfed presses are now available in units of one to four colors with improved hot air drying systems, it was announced by Lee Machinery Corp. Unit is equipped with a rewinder and is offered in a 30 in. width model as well as 15 in., 22 in.

and 27 in. models. It can be used for printing film materials, paper and cloth.

Standard equipment on the presses is an electro hot air drying system. Thermostatically controlled hot air from 0 to 450 deg. F. is blown under constant pressure directly upon the printed web without overheating or harming the material. Circle No. 296 on Reader Service Card.

RETRACTABLE GRAPHIC ARTS KNIFE

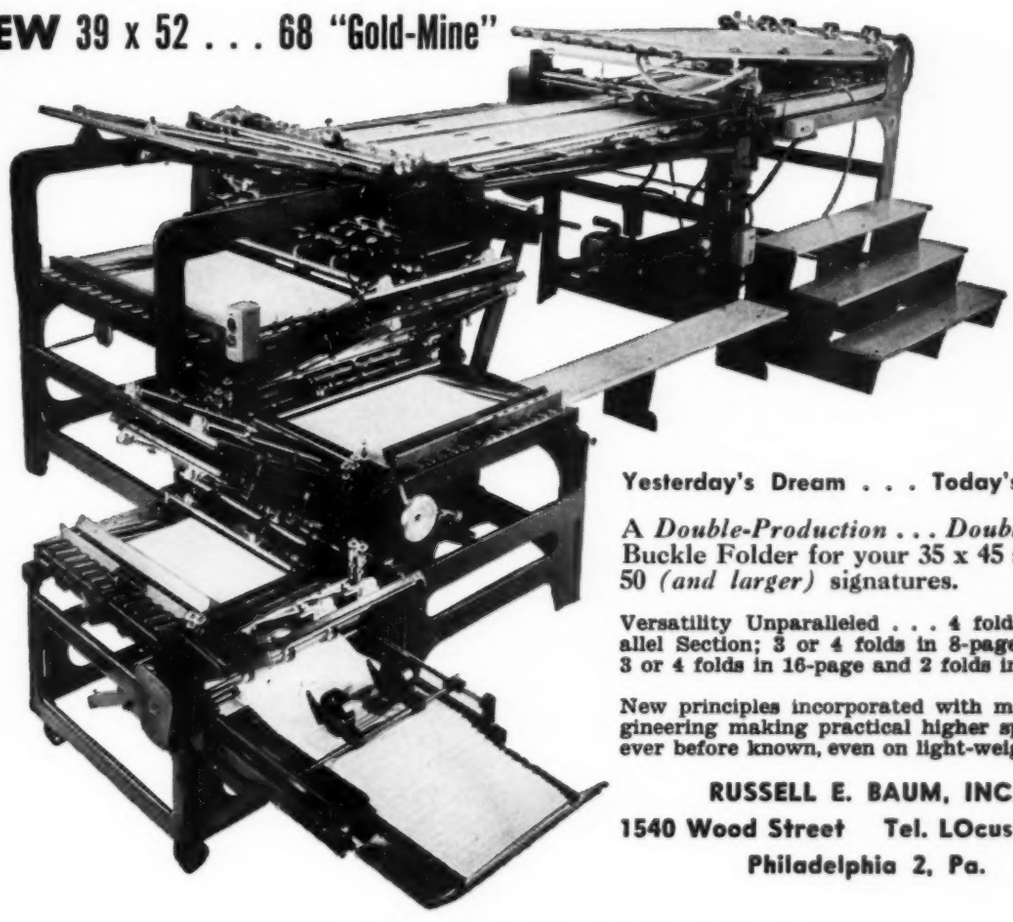
American Wood Type Mfg. Co. has made available a safety, retractable Graphic Arts knife. The knife works in a manner similar to that of the ball point pen. The bevelled knife is extended when the plunger at the top is pressed; when the plunger is pressed again, the knife is retracted and sheathed in the handle. The knife comes in a plastic pocket with refill blade. Some of the recommended uses for the knife are for printers' makeready, die cutters, silk screen stencils, photographic strippers, photoengravers, and box and display work. Circle No. 259 on Reader Service Card.



FAIRCHILD ADDS TELETYPE LINE

Graphic Equipment, Inc., Div. of Fairchild Camera and Instrument Corp., has assumed the sale of Teletype's Model 20 line of equipment. Equipment includes: transmitter-distributors, nontyping reperforators, receiving-only page printer sets, and sending-receiving page printer sets. Addition of this line reportedly enables the firm to offer complete systems, compatible with the Teletypsetter line. Fairchild acquired the assets of Teletypesetter Corporation last year. Circle No. 278 on Reader Service Card.

NEW 39 x 52 . . . 68 "Gold-Mine"



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PRINTING INDUSTRY PATENTS

Covering patents issued August 4, 11, 18, and 25.

All new patents for the printing industry are reported exclusively for PRINTING PRODUCTION by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. PRINTING PRODUCTION is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

PROPORTIONAL SPACING

The invention is applicable to photoprinting apparatus wherein an immediate photographic copy of proportionally spaced and justified text is prepared for direct use, such as for photo-lithography. It provides for mechanically measuring the length of an unjustified line as it is produced and permits automatic justification of the line upon a second typing thereof. 2,898,827 by Robert W. Wirtz, Harold B. Ratcliff, and John S. Turner, Jr., assignors to Wirtz Company.

AUTOMATIC INDEXING

This automatic indexing apparatus is designed for use as an attachment for a typewriter or to be built into new ones. Operation of the typewriter as a pilot machine not only actuates the indexing mechanism but further controls the operation of a photocomposition machine for photographing the selected character. The indexer need not return to a neutral or "home" position after each character selection, which speeds up operation, 2,898,828 by Robert W. Wirtz, Harold B. Ratcliff, and John S. Turner, Jr., assignors to Wirtz Company.

ELECTRICAL INDEXING

This electrical indexing apparatus is similar to that described in patent 2,898,828 and is for use on a Varityper. A feature of the invention is the use of an electrical circuit so constructed as to enable a small number of positioning devices to predetermine a large number of indexing locations. Thus, actuation of a keyboard character key will select the circuit necessary to determine the indexing location associated with the key. 2,898,829 by Robert W. Wirtz, Harold B. Ratcliff, and John S. Turner, Jr., assignors to Wirtz Company.

PHOTOCOMPOSITION SEGMENTS CONTROLLED BY TYPEWRITER

In this apparatus, a photocomposition type segment is synchronized with the positioning of a type segment for typewritten text. By actuation of a single key in a typewriter, the desired synchronized movement is accomplished by the actuating of a single motor control. The type segments are locked in position after having reached their respective printing positions. Both the positioning of the type segment and the printing of the selected character, ordinarily controlled by the operator's finger pressure, are now controlled by the motor. 2,898,830 by Robert W. Wirtz, Harold B. Ratcliff, and John S. Turner, Jr., assignors to Wirtz Company.

PHOTOCOMPOSITION MACHINE

This invention accomplishes its object of reproducing an image of any selected character along the same path of projection, in proper focus and without any relative movement between the character array or the optical system, by producing multiple images of the selected character and insuring that one of the images falls along the path of projection common to all of the characters. It is similar to the apparatus of patent 2,699,101, but does not employ interference phenomenon. Rather, the multiple images are created in a single flat plane by polygonal light reflecting mirrors or refracting prisms in combination with appropriate optics. 2,900,884 by Eugene F. Coleman, assignor to Mergenthaler Linotype Co.

Operation of the Offset Press

By Theodore F. Makarius

This 254 page book has been written especially for the man who must makeready and operate the offset printing press.

In this 254 page book are 25 chapters and 57 pages of Case Histories for overcoming specific troubles. Some of the chapters deal with: Setting the Pressure, Inking Rollers, Dampeners, Ink Fountains, Mounting Plate and Blanket, Split Fountain Printing, Drying Problems, Register Troubles and others. Included is a six page Ink Problem Reference Chart.

Color Charts are included. One of these demonstrates difference in cleanliness of color when mixing two inks which complement each other. Another color chart has been prepared to show the result of mixing different percentages of components.

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REMOVABLE TYPE SLUGS

For handling revision of set type for such work as telephone directories, and to simplify the elimination of the removable lines of type from a column, this invention requires that each column be set with most of its lines consisting of standard type slugs, but with the removable lines consisting of a specially shaped type slug. The removable slugs have positioning surfaces at their two ends which are a short distance below the surface of the removable slug. When the removable slugs are set in a column with retainable slugs, the positioning surfaces are in the same plane with the ends of the retainable slugs. 2,900,901 by James Schwartz and Gunnard E. Stark, assignors to R. R. Donnelley & Sons Co.

GALLEY SLIDE RECEIVER

This galley slide receiver is located at the end of the galley of a line casting composing machine and is adapted to receive the galley slide as the galley is completely filled with slugs. It is so designed and positioned that it will not decrease the normal capacity of the galley and is automatically tilted to an upright position so that it can be easily grasped by an operator. No. 2,895,595 by Ralph Fausnaugh.

Platemaking:

ELECTRIC ENGRAVING MACHINE

In this machine, special provision is made for preparing engravings or screened reproductions differing from an original copy size by certain standard or predetermined size factors. For a given standard size of original copy, the machine can be set rapidly to provide a finished screened product of any selected one of a range of sizes. For example from a standard 4 by 5 inch original photograph, a final engraving plate of a size suitable for one, two or three-column display in a newspaper may be obtained. 2,899,493 by Samuel W. Levine, assignor to Fairchild Camera and Instrument Corp.

MACHINE FOR PRE-REGISTERING STEREOTYPE COLOR MATS

With this machine, the borders of stereotype color printing mats can be cut or trimmed accurately so that the metal plates cast from the paper stereotype mats for the different colors will print accurately in register. This is said to produce sharply defined color illustrations without the blurring caused by lack of precise registry. The machine provides a supporting structure to which the plate can be clamped while it is moved to and fro in relation to registry mecanism. 2,900,735 by Ferdinand A. Mier, assignor to Knight Newspapers, Inc.

DIAPHRAGM CONTROL FOR CAMERA

The apparatus is designed for adjusting the iris diaphragm opening of a photoengraving camera. It is said to provide a correct indication of the f:stops of such adjustments throughout a range of negative to copy size ratio settings of the camera. This adjusting and indicating mechanism is mounted on the front of the camera in laterally spaced relation to the lens assembly. 2,900,869 by John L. Bjelland and Floyd W. Flynn, assignors to Powers Chemco, Inc.

SPIRIT DUPLICATING PROCESS

In a method for preparing a spirit duplicating master from which a number of prints may be run by the usual spirit duplicating process, a sheet carrying a dye-containing layer and a frangible layer of hydrophilic, alcohol-impermeable organic colloid temporarily adhered to the outer surface of the dye layer is pressed against a moist adhesive photographic image until the image has adhered to the colloid layer. The adhesive image is then separated to obtain portions of the colloid layer adhered thereto and to leave bare areas of dye-containing parts. 2,898,852 by Henry C. Staehle and Carolyn K. Tupis, assignors to Eastman Kodak Co.

Printing Presses:

PERFECTING LETTERPRESS APPLIES IMPRESSIONS IN SUCCESSION

In a rotary sheetfed perfecting letterpress, two or more adjacent, identical color printing units are arranged to print on one side of the sheets. Additional printing units apply one or more impressions upon the other side of the sheets. Thus the impressions on the two sides of the sheets are applied in succession rather than simultaneously. The transfer drums used are mounted in an arrangement similar to that discussed in patent 2,100,852. 2,898,851 by Henri E. Peyrebrune, assignor to Miehle-Goss-Dexter, Inc.

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ANTI-OFFSET DEVICE UTILIZES WET OR DRY SPRAY

For preventing the smudging of a fresh ink impression, this invention has eliminated prior problems arising from the need for switching from a dry to a wet dusting method. This is accomplished by equipping the printing machine both with means for dry dusting and wet dusting, which can be selectively connected to an air compressor through a shifting unit. The shifting unit automatically establishes the air pressure required to operate the device to which the air is applied. 2,901,179 by Artur Buttner, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg.

WEB DRIER FOR PRESSES

The apparatus is designed to efficiently dry the ink on the printed side of a web and to treat the opposite side of the web to prevent an excessive loss of moisture in the paper. This is accomplished by supplying heated air to the printed side of the web and simultaneously discharging steam to the opposite side of the web. 2,900,738 by Bernard Offen.

DISPOSABLE BLANKET AND PLATE

The invention features a new disposable blanket and plate for making short printing runs. The blanket and plate combination comprise a pair of sheets, one above the other, of suitable material. Each has a series of fingers at the leading end which are arranged in staggered

PATENT SEARCHES

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form, one of the sheets being adapted to serve as a plate and the other as a temporary blanket. The leading ends of the superposed sheets are presented to the nip between the plate and blanket cylinders of the machine which are provided with grippers for engaging the fingers so as to clamp the sheets to the respective cylinders. 2,898,853 by Derek Norton Wadlow, assignor to Rotaprint Limited.

HIGH CARBON PRINTING INKS

Improved flow properties, blacker printing without showthrough, and nonmisting under high speed printing, are the qualities claimed for this ink. It is produced by providing a carbon black content of at least 16% by weight of the ink and a ratio of yield value, in dynes per sq. cm. to plastic viscosity, in poises, of less than 70 at 30 deg. C. The carbon black is admixed with a hydrocarbon vehicle comprising at least 80% by weight mineral oil, a dispersing agent selected from the group consisting of gilsonite, asphalts, asphaltic petroleum residues, rosin, limed rosin and bodied drying oil, and dehydro abietyl amine as an antiflocculent. No. 2,891,872 by Andries Voet, assignor to J. M. Huber Corp.

OFFSET DAMPENING SYSTEM

The invention uses the conventional assembly of ink rollers to apply both ink and water to the plate cylinder. The underlying principle of the system is based upon the high surface speed of the ink rollers and the difference in specific gravity between printing ink and acidulated water. The heavier printing ink will tend to cling to the surface of the ink rollers, while the lighter acidulated water will tend to remain on the outer circumference. 2,897,753 by Leonard G. Erzinger.

PRINTING PLATE AND CYLINDER

The plate and cylinder have improved interlocking parts and firmer support is provided for the plate. The plate forms a seal which prevents the ink from penetrating the cylinder lock mechanism. This same seal resists the creeping and buckling inherent in all clamping actions at the clamping line, and assures that the plate will remain in registry. The device is especially designed for use with dry offset, rotogravure and wet offset printing presses. 2,898,854 by Earl A. Crawford.

IMPROVED PLATE HOOKS

This invention has to do with the tension lockup plate cylinders adapted to hold printing plates by circumferentially

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applied tension. The present application is a division of that originally filed on patent 2,639,668 and the invention is an improvement on the art of patents 2,236,230 and 2,428,263. The lockup cylinder has a number of take-up hooks supported on movable, resiliently biased pivots and connected to an actuating shaft adapted to swing the hooks simultaneously into and out of tensioning relation with one or more printing plates. 2,900,903 by Corson Walter Chase, assignor by mesne assignments, to Miehle-Goss-Dexter, Inc.

PRINTING PRESS ROLLERS

For multicolor work, this invention contemplates the accurate diagonal alignment of printed impressions and particularly the alignment of a plate on a roller relative to the corresponding plates of other rollers of the same or other press, after the plates have been clamped about the rollers. The reel rod is mounted in a reel rod carrier or bar which is adjustably mounted in an over-sized longitudinal recess or chamber in the roller and adjustable positioning screws are provided at each end of the roller to adjust the reel rod carrier and thus the reel rod and plate relative to the roller axis. 2,900,904 by George Hantscho.

NUMBERING FRAME FOR CYLINDER PRESS

The disadvantages of prior art for printing with numbering frames in high-speed cylinder presses is obviated by the fact that a stop device, disposed in the path of movement of a numbering frame for effecting the advancement or displacement of the numbering mechanism, is movably arranged on the machine frame. The stop device is coupled with the lever for starting and stopping the printing operations so that the stop device can positively be moved out of the path of movement of the numbering frame or the type bed carrying the latter when printing is topped. 2,900,898 by Artur Buttner, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg.

STOP GAUGE CONTROLS SHEET

The chief object of this offset printing machine is the use of a gauge or stop mechanism embodying novel and advantageous features of construction. The machine is comprised of a plate, blanket, and an impression cylinder and may include a delivery cylinder. The gauge or stop is located at/or adjacent to the impression cylinder to stop the sheet and control the position of the leading edge of the sheet at the cylinder. 2,899,202 by Luis Mestre, assignor to Lewfor Development Corp.

MAKES COLOR CHANGES EASIER

This inking mechanism mounting facilitates operating adjustments and changeover from monotone to multicolor operations. This is accomplished by means of an ink rail carrying an ink pump on each of two sides. The two ink pumps are driven by cooperating gearing and they are coupled and uncoupled by cooperating clutches. 2,900,900 by Charles A. Harless, assignor to R. Hoe & Co., Inc.

WASHUP, COLOR SEPARATOR AND INK FLOW CONTROL DEVICE

The patent features a combination printing press washup, color separator and ink-flow-control device which uses a rotatably mounted hard-surfaced cylinder in tangential contact with and driven by ink transfer members of the press. This cylinder cooperates with a rotatably mounted bladed bar in spaced parallel relation to the roller. The blades are resiliently mounted and adjustable in a manner permitting some of the blades to bear against the roller with greater force than others. 2,898,855 by Raymond R. Richter, assignor to The Dayton Rubber Co.

Feeding, Folding, Delivery:

WEB SLITTER AND REWIND

The mechanism is designed for use with the rewind machine riding roller covered by patent 2,743,879, and it is adapted to score-cut a running web into a number of widths and rewind them on a single shaft. The cutter bar and its operation have been improved by the present patent. 2,897,893 by Leonard Rockstrom and Leon A. Schmidt, assignors to Cameron Machine Co.

CONTINUOUS SHEET PILE FEEDER

The feeder affords continuous pile feed by the use of continuously and unidirectionally circulating sets of conveyor chains leaving one or more spaced sets, of pile table carriers, by which the tables with the piles supported on them are moved upwardly. The invention includes safety mechanisms for the feeder, devices for accurately registering the sheets to be fed and a device for fixing and maintaining the right spacing between the top of the pile of sheets being fed and the suction nozzles for lifting each sheet. 2,900,186 by Adolf Schwebel, assignor to MABEG Maschinenbau G.M.B.H.

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PALLET FOR CONTINUOUS FEEDING

For feeding sheets to a press, this pallet when supporting a depleted pile may be withdrawn slowly to enable a wedge shaped edge of the pallet to lower the rear portion of the depleted pile gradually. The mechanism for raising the new pile step by step, will bring it into supporting position for the expiring pile and maintain it within the range of the sheet separating mechanism. The pile height gauge and sheet separating mechanism are disposed over the rear part of the pile. 2,898,105 by Morton Schmidt, assignor to Schmidt Lithograph Co.

WEB ATTACHING APPARATUS

In an apparatus for automatically attaching a new web of preprinted paper to an expiring web, two light-sensitive devices scan marks on the first and second webs and cooperate with a correction mechanism to attach the webs in accurate register. A tension measuring device is used to apply the controlled tension to the two webs. 2,899,143 by John F. Crosfield and Daniel Gold, assignors to J. F. Crosfield Ltd.

SHAFTLESS MILL ROLL STAND

Heavy rolls of newsprint paper can be rapidly and efficiently handled by this stand. A pair of cylindrical elongated side-by-side float rollers are provided upon which the roll to be unwound is carried. Ways parallel to the rollers carry

". . . you and your damn bubble gum!"

two slidable tail stocks movably along the ways. Dead centers respectively on the stocks are slidable freely vertically in the stocks toward and away from the rollers. Feelers laterally of the rollers are pivoted for sensing the diameter of the roll being handled on the rollers and are coupled to the dead centers for automatically aligning the dead centers with the center hole of the roll at rest on the rollers. 2,899,145 by Aloysius J. Carr.

WEB TENSION CONTROL

This control incorporates a cylinder mounted for support of a web of paper as it enters a printing press. As the web is pressed into contact with the cylinder, a differential drive connected to the cylinder and powered by the drive of the press rotates the cylinder in one direction for feeding the web toward the press. A constant torque motor is connected to the differential drive for urging the cylinder in the other direction to an amount necessary to maintain a constant tension on the web. 2,899,199 by Anton R. Stobb.

SHEET FEEDING MECHANISM

A feature of the invention is front feed register lays which are operated separately from front grippers. These feed markers or lays are preferably suspended so that they swing pendulum-like about a shaft. For this purpose, the pivotal axes of the front grippers are advantageously used as the suspension shaft, about which the feed register lays oscillate, and on which they are arranged so that they move independently of the grippers. 2,899,203 by Artur Buttner, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg.

AIR VALVE FOR FEEDER

For use with existing sheet feeders of the blower type, this rotary vacuum and air control valve is composed of a rotor within a stator which is provided with a single air pressure compartment and two interconnected and simultaneously evacuated vacuum compartments. It is not only capable of controlling the delivery of air under pressure at different predetermined intervals to two independent devices connected with the valve, but also the creating of vacuum at different predetermined intervals in two other independent devices. 2,898,937 by Leo C. Williams, assignor, by mesne assignments, to Miehle-Goss-Dexter, Inc.

PRINTED MARKS CONTROL CUT-OFF

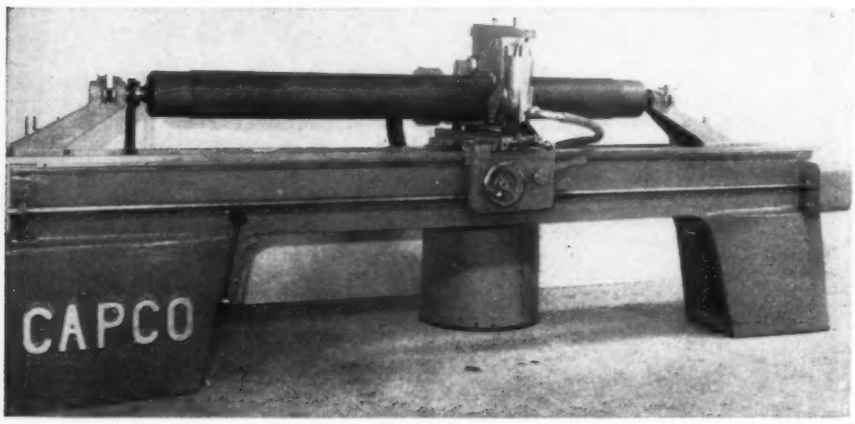
A high speed shear cuts a continuously moving web into varying lengths in response to marks on a sheet or web of paper. A pair of web driving rollers and a fixed and movable blade arrangement is connected with an electromagnetic device which actuates the blade in response to the marks on the web. Thus a cut of any length may be made according to printed indicia and the machine does not have to be reset for each size of paper to be cut. 2,898,995 by William F. Funnell, assignor to Radio Corp. of America.

HANDLING SHEETS OF PAPER

The apparatus separates sheets of low quality paper from a stack for individual feeding. A needle is positioned adjacent a vacuum nozzle with the point piercing the top sheets of the stack, and the resulting restraining motion separates the top sheet to move it past the point onto the body of the needle. No. 2,878,016 by John K. Russell and Walter W. Boggs, assigned to Luber-Finer, Incorporated.

RIDER ROLLER PROVIDES TENSION

For efficient winding of a web for a printing machine, an effective rider roll assembly is used. As the diameter of a new roll increases, the friction between the



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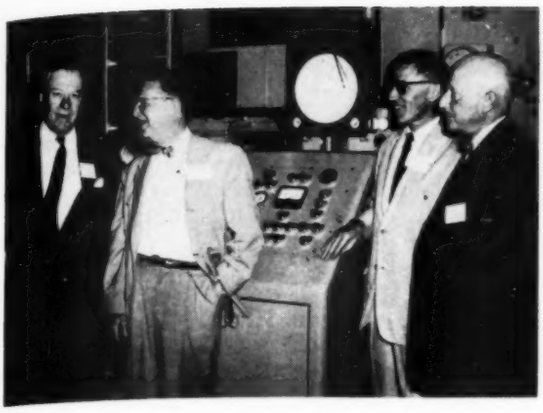


M-G-D Officers View Mercury Press—Three executives of Miehle-Goss-Dexter, Inc. viewed the new Mercury J-4 rotogravure press in operation during a recent visit to the Mercury Engineering Corp., a subsidiary of M-G-D. Left to right, are: John E. Eddy, chairman; Robert C. Corlett, president; J. Robert Baumgartner, president of Mercury, and Joseph A. Riggs, executive vice president, M-G-D.

rider roll and the web is caused to decrease by means of a control responsive to the extent of upward movement of the rider roll caused by the accumulated web material on the new roll. The rider roll is driven by a drive belt running at a constant speed slightly in excess of that of the winding roll. The driving and loading relation of this belt to the rider roll is continuously decreased by reduction in the tension of the belt in accordance with the vertical position of the rider roll assembly on the winder frame. 2,901,191 by Richard W. Phelps, assignor to The Black-Clawson Co.

WEB WINDING MANDREL

This web winding mandrel and drive permits the relatively small tensions that can be applied by thin paper webs to overcome the inertia of the rotating mandrel structure to control and retard the rotational speed thereof. The drive for the mandrel is in the form of a clutch in which friction pads engage a drive wheel and provide the same frictional or driving engagement therewith irrespective of the rotational velocity of the mandrel. 2,901,192 by Ernst Daniel Nystrand, assignor to Paper Converting Machine Co., Inc.

AUTOMATIC ADJUSTING FEEDER FOR COLLATOR

The machine is of the type in which the sheet feeding mechanism is adapted to withdraw successive sheets from a stack and to automatically adjust itself to variations in the height of the stack as sheets are withdrawn. The machine control becomes inoperative in the event that one or more sheets fail to be withdrawn. 2,901,249 by Robert G. Dexter and John A. Willett, assignors to Cummington Corporation.

WEB TENSION CONTROL

In a new and improved printing press, particularly a back-to-back perfecting press of the web type, the tension is maintained constant by an improved web tensioning mechanism, which makes it possible to obtain greatly improved registration of color work. The tension control is operated by infinitely variable speed transmissions which are actuated in response to the movements of a take-up or tensioning roll for the web. 2,897,754 by William R. Spiller, and Thomas H. Johnson, assignors to Harris-Intertype Corp.

Binding:

ROUNDING, JOINTING AND CASING-IN MACHINERY

For improved, safe bookbinding procedure, this automatic signature mechanism makes possible a continuous process by coupling, feeding, and controlling the rounding and backing machine for synchronous coaction with the casing-in machine, so as to eliminate most of the objectionable handling operations heretofore necessary in these phases of book manufacture, and to speed up production while reducing losses from rejects and other causes. No. 2,895,148 by William B. Hildmann, assignor to Brock & Ranklin, Inc.

STACKING ENVELOPES AND LIKE ARTICLES

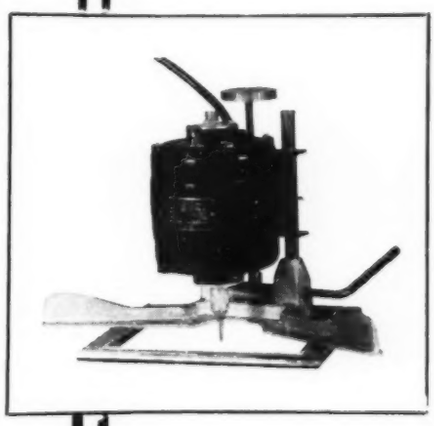
The feed speed of the machine is so timed that an operator may attend the supply of material to and the removal of finished articles from the machine without undue haste. This results in less damage to the product. Patent 2,856,189 by Richard Winkler and Kurt Dunnebier, assigned to Berkley Machine Co.

APPARATUS FOR STITCHING ARTICLES

Booklets and small pamphlets are prepared in a semi-automatic or fully automatic process by this apparatus. Sheets are folded after having been piled up, after which the sheets of the folded and partly opened piles are brought into register while being conveyed to a stitching machine. This makes it possible to apply a considerably greater force to the sheets being registered and more accurate results are obtained. No. 2,895,730 by Hans Biel, Ernst Pfaffle and Fritz Bertsch, assignors to Hans Sickinger.

BOOK IMPRINTING MACHINE

The machine receives books from a saddle stitcher and trimmer and carries them over a pair of rotating imprinting cylinders for imprinting the front and back covers of the books. Associated with each imprinting cylinder are two movable imprinting rollers which are so adjusted and coordinated that either may print in the same identical space on the front or back cover of a book. The machine is especially useful for imprinting the names



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and addresses of dealers on a selected number of catalogs from a big run. No. 2,896,537 by Otho Kile and Ernest J. Sarring, assignors to R. R. Donnelley & Sons Co.

BOOKBINDING MACHINES

The machine is designed for the combined operations of processes known as unsewn binding and lining of books. The arrangements used for gluing the back of the book and lining are similar to those discussed in British Patent No. 728,221, but the glue tank is arranged to extract at right angles to the book conveyors. A novel and efficient mechanism is provided for stacking the books as they emerge from the machine. 2,900,093 by Lionel John Bryant Rushent French.

UNITARY PUNCH AND BINDER

In binding a stack of sheets with a bookbinding element having a backbone and resilient curled fingers for impaling on the sheets, a plurality of punches are used for perforating the sheets to receive the curled fingers. Spreading fingers are provided for movement laterally into engagement with the curled fingers of the binder and along the fingers for uncurling same. The punches and spreading fingers are alternately operated by the use of a single lever operated shaft. 2,898,613 by Henry E. Frederick, assignor to General Binding Corp.

APPARATUS FOR BINDING BOOKS

In this method of binding and covering books, the arrangement provides for printing two-up and binding sidewire or patent bound books one-half size, so that two pages are printed simultaneously side by side on the same sheet and subsequently, either before or after separation, the pages are cut apart and separately bound. The sequence of covering and severing the two books may be varied, the essential point being that after the book has been assembled by the proper stitching before or after covering, the two books will be severed. 2,897,523 by Anthony J. Allegretti and Raymond P. Fischer, assignors to the Cuneo Press, Inc.

LOOSE SHEET BINDING MACHINE

With this machine, loose sheets are first introduced into a feeder, then moved by a press assembly onto a binding assembly which cuts and binds the sheets into a flexible, integral unit, either with or without the aid of threads. Finally the assembly is ejected onto a conveyor for transportation of the bound sheets to a specified area. The movements of the various assemblies are entirely automatic and synchronized and no hand operations are required. 2,897,522 by Spyros Michael Fotiades.

FOLDING-BINDING MACHINE

In the forming and folding of manifold sheets, such as discussed in patent 2,525,-937, this machine performs all operations previously requiring hand work. The machine thus automatically impresses pleats into a scored sheet and binds the foldable sheet within a backer whereby opening of the backer will cause the sheet to completely unfold so that the whole face thereof is visible. Closing the backer will collapse the sheet into a small fraction of its opened condition. No. 2,893,297 by Albert Soffa and Frederick W. Kulicke, jr., assignors to Walter S. Sachs & Co.

PAPER SHEET FOLDING MACHINES

The machine provides for the initial registration of a paper sheet with respect to perforating knife blade disposed transversely to the direction of conveyance of the sheet and the subsequent registration of the sheet, after perforation, with respect to a knife folder blade whereby the knife fold is made exactly along the perforation line. No. 2,896,942 by Stanley Reginald Fry and Denis Vernon McCormick, assignors to Camco Machinery, Ltd.

BOOKS for the PRINTING INDUSTRY

What the Lithographer Should Know About Paper

This book, newly issued by the Lithographic Technical Foundation, is a revision of a text published in 1949 and 1957. Intended for use as a reference manual for all who come into contact with paper, the book explains in layman terms the problems encountered with litho papers.

The most extensive revision is the section on relative humidity balance. This revision, approx. six pages in length, concerns itself with an explanation of the various moisture testing devices on the market and how they are read.

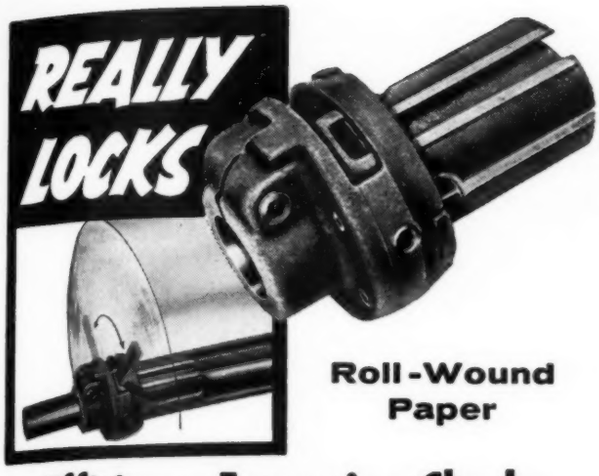
Another revised section in the same chapter is that of color of paper. This addition contains information on the two systems by which most paper manufacturers establish standard color paper.

What the Lithographer Should Know About Paper—Paperbound; 166 pp.; size, 5½ in. by 8½ in.; illustrated. Available to members of LTF at $1.50; nonmembers, $5.00. Order from LTF, 131 E. 39th St., New York 16, New York.

Primer of Lamps and Lighting

Providing basic information and material on lighting to enable the reader to deal with lamps and lighting layouts is the *Primer of Lamps and Lighting*, prepared by Willard Allphin.

Written in simple, down to earth style, the *Primer* includes correct uses of lighting and information on fluorescent lamps and circuits. All pertinent questions are answered in helpful terminology. A calculation slide rule inserted in a back pocket of the cover makes the mathematics of the Lumen formula easy to apply. Priced at $10 per copy, the book may be ordered from: Chilton Company, Book Division, 56th and Chestnut Sts., Philadelphia 39.



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Needs of Letterpress

(Continued from Page 49)

chemical reaction in the etching of copper uniting with the etched copper sets up a gelatinous precipitation. This gelatin, which covers the entire exposed area of the copper plate, is not completely impermeable to the etchant so there is a continuous etch through the protective at a very slow rate which in most cases is very insignificant.

AuBuchon felt the minimum depth requirements of the wrap-around plate of 0.008 in. to 0.010 in. will be suitable for making combination line and halftone plates of copper. He added that present copper powderless etching equipment in the field will require few changes to become practical for etching the thin gauge wrap-around plate.

When the negatives are shot as close to copy as possible for making the Per-etch copper wrap-around plate, he said it requires staging or painting of the halftone or screened areas after the depth of the halftone has been reached. In this method, painting out is necessary because the Per-etch process hasn't developed a protective to cut off or fill in the screen areas after the required depth has been achieved. Another successful method mentioned by the speaker is to prepare the negatives so the highlight dot is large enough to allow for the slight reduction that takes place. The middle tones reduce such a small amount that they should be considered, but if overlooked it wouldn't change the quality.

Thicknesses of Zinc Plates

Spillman B. Gibbs, manager of Photo Products Div., Imperial Type Metal Co., reiterated an earlier view that the litho industry is showing more interest in wrap-around printing systems than letterpress people. It was his personal view that lithographers will move fast on this process ". . . as it is certainly a distinct advantage over water and ink."

Gibbs spoke of gauges and sizes for the zinc wrap-around plate. He said the most popular ones seem to be 0.025 in. and 0.032 in.; sizes are 27 in. by 30 in. and 30 in. by 31 in. He said Imperial is experimenting at the present time with a 0.040 in. gauge. Gibbs added that if the metal is any thicker than this, the plate will have to be precurved.

In a brief announcement, A. J. Powers, Chemco Photoproducts Co., reported his company will have a 50 in. copper powderless etching machine available in a year.

Requirements in Negatives

A reminder that there is no universal kind of halftone or combination negative that is satisfactory for all photomechanical plates was made by Bernard R. Halpern, technical representative, Photo Products Dept., E. I. du Pont de Nemours & Co., Inc. Each type of wrap-around plate, he said, has its own modification in platemaking and accordingly the cameraman must shoot for the particular plate.

Halpern, who discussed negatives for the wrap-around plates, emphasized controlled photographic duplication as a more accurate and less costly method in transmitting the subject detail and tone values from the copy. He said this permits the making of identical duplicate plates for gang subjects, and the uniform reproduction of a subject in several sizes. A cameraman can also introduce some photographic modification, such as accentuating highlight detailed contrast, but there still remain some things that must be done by hand.

The latter part of Halpern's talk dealt with the substitution of photographic proofs for wrap-around printing, such as silver prints or diazo prints, in place of the regular inked proofs which now prevail in

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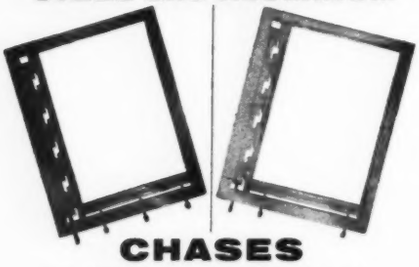

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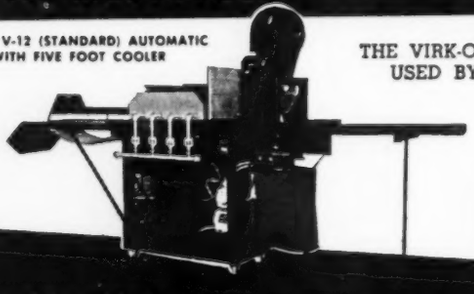
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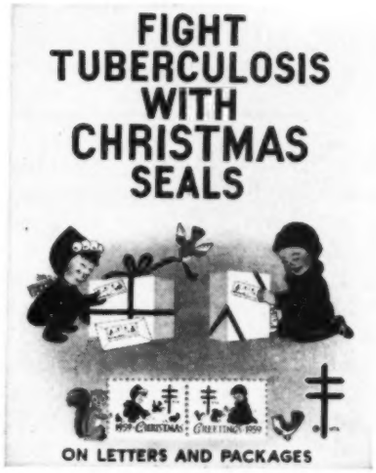
normal letterpress practices. Such a change, he said, will require customer education for interpreting the anticipated appearance of a printed job from the photographic proofs. It will also be necessary to instill confidence in all concerned that the printed values will turn out as represented. He added that such confidence can only be established by installing accurate production controls in photography and in platemaking.

He concluded that the wrap-around plates will require "an engineered negative." It must be built to engineering tolerances and its printing values must be accurately controlled to an exact mathematic relationship.

Color Scanning Devices

A review of electronic color scanning devices which are to be introduced next year to the Graphic Arts, such machines already on the market, and those still in the development stage was provided by J. A. V. Hyatt, vice president and general manager, Fairchild Graphic Equipment.



The machines to be marketed in 1960 include the Fairchild Scan-A-Color, the British-made Crosfield Scanatron, the German-made Hell Colorgraph, and the German-made Hell Vario-Klischograph. Those already on the market include the Time-Life scanner, and the British-made Hunter-Penrose H.P.K. Autoscan. Still in the research and development stage are the Miehle color scanner and the French-made Belin Belinograver.

In Dallas, an informational film on photoengraving was premiered by Eastman Kodak Co. The film briefly traces the history of photoengraving, and describes how it works and what it does in laymen's language. It is available on a loan basis to photoengraving companies and Graphic Arts trade organizations.

Color Control Bars

(Continued from Page 41)

film negatives have been made available for photoengravers' use. These can be secured by writing: American Photoengravers Assoc., 166 W. Van Buren St., Chicago 4. A nominal charge of $5 is charged per set.

In addition, lockon screws for achieving registration and lockup on the proof press are available from: Vandercook & Sons, Inc., 3701 W. Touhy Ave., Chicago 45. These screws, in sets of four include a wrench which fits a flat head socket and can be purchased at $2.70 per set.

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Use the convenient yellow Reader Service Card found in this issue for requesting free literature about printing equipment and supplies offered in PRINTING PRODUCTION's Graphic Arts Literature section.

Graphic Arts Research

(Continued from Page 52)

of an industry, could have said as printers do, "Let my supplier solve my problems." Of course, Time, Inc., has done some of this, but the company also has a standout record for consistently supporting research and development in Graphic Arts.

Paul Thoma, Time's laboratory director, has said that research at its lab in Springdale, Conn., is directed at lowering costs and improving quality. He does not admit to doing basic work in the laboratory, but it would have been difficult to move a machine like the Time color scanner into production without having done something fundamental.

There is little question but that the efforts of Time, Inc., have been the biggest single private source of inspiration for research and development in the printing industry during the past several years. Its work on presses, laminated plates, Nylon plates, color reproduction and paper has been outstanding for the effects it has had on suppliers and printers, instilling in them the desire to show improvement too.

Advocates Group Effort

J. Homer Winkler, Battelle Memorial Institute, Columbus, O., makes an observation about research in the printing industry, which will be the basis for another story. He said: "Only a few of the largest printing companies have a research budget which could lead to significant results. I doubt if any of their programs include basic studies, but are more concerned with immediate technologic improvements. . . . I do not believe that small companies are justified in spending large sums of money for research. Such companies should participate in group efforts and support organizations that encourage and promote research. . . . Certainly all of the larger printers and publishers, such as the top 20, can afford a research program and should be supporting one." There are some excellent examples of this group approach in the United States, and the European picture is even more encouraging in the fundamental study field of research.

In this group about which a whole feature story can be written, are the Lithographic Technical Foundation, the oldest and best established of all; Photoengravers Research, Inc., which has recently revolutionized the etching of copper engravings with its powderless etching process for copper; Gravure Research, Inc.; Printing Plates Research, Inc., which started the plastic molding process for electrotypes, and now is developing a plastic-backed electrotype; Graphic Arts Research Foundation, where the Photon photographic typesetting machine was developed; and the ANPA Research Institute, sponsored by newspaper publishers. We shall have much to say about the National Printing Ink Research Institute and its program too.

Yes, research has a sort of status in Graphic Arts, but we need much more evidence to show that the industry is sincere in its efforts to improve through research.

NEXT MONTH: *The story of several research organizations in the United States and Europe where organized programs are being conducted for the printing industry.*

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Helpful Literature

(Continued from Page 28)

DAYCOLLAN PRINTING ROLLERS

Information on Daycollan printing rollers has been made available by Dayton Industrial Products Co., Div. Dayton Rubber Co. Samples of runs on different stock are included. Circle No. 342 on Reader Service Card.

PRESS-STEREO BULLETINS

Literature has been released by Corkpak Company, Inc. regarding its tympan paper, draw-sheets, cutting rubbers, and other newspaper pressroom and stereotype supplies. Specifications and prices are given. Circle No. 346 on Reader Service Card.

Bindery, Mailroom

WIRE STITCHING MACHINES

The Acme Steel Co., Chicago, has prepared a catalog giving details on over 30 wire stitching machines and describing methods of wire stitching. Typical applications are shown on all types of box stitching, bagging, carding, labeling, book stitching, and metal stitching. Information on accessory equipment and stitching wire is included. Circle No. 322 on Reader Service Card.

MANUAL CUTTER CONTROLS

A revised edition of the catalog on Micro Switch trip controls for paper cutters has been issued by Micro Switch, Div. of Minneapolis Honeywell Regulator Co. Descriptions and photographs of 15 different installations are included. Circle No. 320 on Reader Service Card.

ELPAR CLAMP TRUCKS

Case history sheets on the use of Elpar clamp trucks for roll handling in the newspaper industry have been released by Elwell-Parker Electric Co. Elpar trucks enable ceiling high stacking and prevent paper damage. Circle No. 334 on Reader Service Card.

FLAT SHEET COLLATOR

Data on the flat sheet collator are found in a file folder issued by Macey Company, subsidiary of Harris-Intertype Corp. The folder contains product literature, floor plans and other information about collating equipment. Circle No. 326 on Reader Service Card.

Miscellaneous

ROLLED STEEL FLOOR PLATE

Alan Wood Steel Co. has issued Bulletin AL-N5 to describe the A. W. Algrip abrasive rolled steel floor plate, which can be used as an independent flooring overlay. It is recommended for use wherever slipping hazards exist. Circle No. 337 on Reader Service Card.

WEST VIRGINIA PAPER SAMPLES

A folder of samples of Clear Spring Index line of paper is offered by the West Virginia Pulp and Paper Co. Samples of Clear Spring Index treated by various processes and a general temperature conditioning chart for paper are included. Circle No. 321 on Reader Service Card.

CIRCUIT BREAKER ACCESSORIES

A 12 page booklet describing General Electric Co.'s line of industrial molded case circuit breaker accessories and modifications has been released. The publication is illustrated and provides purchasing information. Circle No. 347 on Reader Service Card.

MIDWEST PUBLISHERS' CATALOG

Midwest Publishers Supply Co. has issued a catalog describing its complete line of composing, stereotyping, engraving, electrotyping and pressroom equipment and supplies. Circle No. 348 on Reader Service Card.

KELLEY ADJUSTABLE DOCKBOARDS

The Hi-Lo Adjust-A-Lip dockboard is featured in a kit released by Kelley Company. In addition to information on this permanent dockboard, the kit contains facts, figures and equipment data in connection with planning a new or improved truck loading dock. Circle No. 314 on Reader Service Card.

ATF PRODUCTS AND SERVICES

All products and services offered by American Type Founders Co. are described in a 16-page booklet, *This is ATF*. Illustrations and brief technical summaries of the various printing equipment available through ATF and ATF's General Printing Equipment Div., Web Division, and Type Division are given. The sales network and the locations of service offices and dealers are also included. Circle No. 327 on Reader Service Card.

HUMIDITY PROBLEMS IN PRINTING

A booklet dealing with humidity problems in the printing industry has been made available by Bahnson Company, makers of 14 various unit humidifiers. Circle No. 340 on Reader Service Card.

ELWELL-PARKER TRUCK LEASE PLAN

Literature covering various industrial truck lease plans offered by the Elwell-Parker Electric Co. has been released. A series of tables containing costs of leasing a truck as opposed to purchase is included. Circle No. 308 on Reader Service Card.

COMPOSITE PAPER CATALOG

Paper Composite Sample Books have been published in two volumes by Peninsular Paper Co. Contained are samples of cover stock and colored specialties. Paper specifiers can consider colors and weights of the 12 stock brands. Characteristics, use suggestions, production pointers, specifications, weights and sizes stocked are given. Circle No. 349 on Reader Service Card.

VISUAL CONTROL CHART

Conley, Baltzer & Steward has published a folder describing the Rol-a-chart, Mark 11, a 23½ in. by 25 in. welded steel portable wall chart. Items such as customers' orders, production scheduling, ad schedules and machine loading can be written on a plastic rolling index which has space to list 80 items vertically. Circle No. 350 on Reader Service Card.

OFFSET PAPER SAMPLER

A Nibroc offset paper sampler has been made available from Brown Company. Booklet contains sample pages of both regular and vellum finish. Circle No. 351 on Reader Service Card.

DOYLE SHEET CLEANERS

Doyle sheet cleaners, claimed to provide good printing without stops for unnecessary washups, are discussed in a bulletin offered by J. E. Doyle Co. Circle No. 352 on Reader Service Card.

SAFETY EQUIPMENT MANUAL

A manual on flammables, and a catalog of safety equipment are included in literature being offered by The Protectoseal Co. Catalog is divided into 6 general plant operating sections for reference. Circle No. 353 on Reader Service Card.

CONTRAST CONTROL BOOKLET

Contrast Control Brings Cost Control Through LogEtronics, is the title of an 8 page booklet released by LogEtronics Incorporated. Descriptions and applications of the LogEtronic systems are included plus a series of comparative points. Circle No. 354 on Reader Service Card.

LIQUEFIED PETROLEUM GAS FUEL

Advantages of liquefied petroleum gas as a fork truck fuel are discussed in a 6 page color booklet offered by Industrial Truck Div., Clark Equipment Co. Examples of savings from six applications are included. Circle No. 355 on Reader Service Card.

G-E POLYDYNE DRIVES

A 16 page, two color booklet describing the new line of Polydyne mechanical adjustable speed drives has been released by General Electric Co. Included are principles of operation, configurations and features. Circle No. 356 on Reader Service Card.

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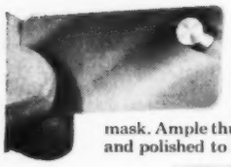

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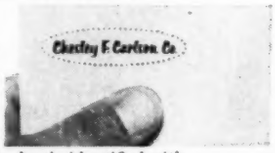

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NOVEMBER 1959

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MEADE AND COMPANY, 454 Statler Office Bldg., Boston 16, Mass. Phone: LIberty 2-9677.

MELBURN O. SIMMONS, Mid-West Advertising Manager, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

WM. A. AYRES, West Coast Representative, 233 Sansome St., San Francisco 4, Calif. Phone YUkon 6-2981.

FRED FRISENFELDT, 1709 W. 8th St., Los Angeles 17, Calif. Phone: HUbbard 3-2777.

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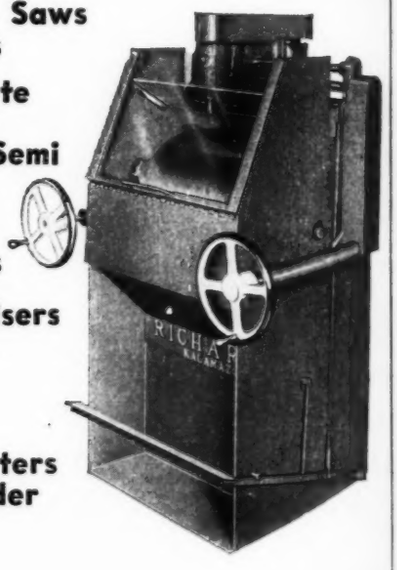

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Actress at Curtis—Actress Arlene Francis is an observer as signatures of the S&H trading stamp catalog roll off a Cottrell double five-color web letterpress at Curtis Publishing Co., Philadelphia. Catalog is reported to be the largest printing order ever placed. Watching with her are Frank P. Rossi (left), executive vice president, Sperry and Hutchinson, and Henry M. Chestnut, vice president and director of manufacturing, Curtis.

GRAPHIC VIEWS

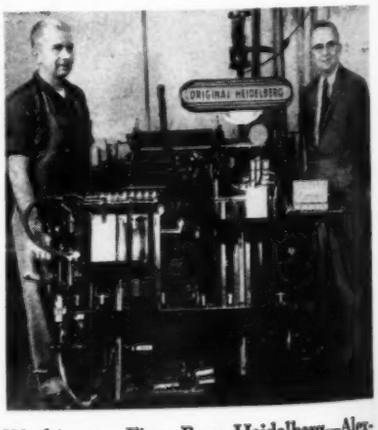
of the Printing Industry

Presses Crowd Miehle Plant—More than $2.5 million worth of offset and letterpress equipment for the carton and packaging industry are being built in these Miehle Company production lines in Chicago, according to E. Luscombe, manager of the carton division. Six, five, and three color presses are included in the orders being filled in this picture.

Printing Industry of Washington, D. C., Elects—New officers of the Printing Industry of Washington, D. C., Inc., are left to right: Joseph Cangalosi, National Publishing Co., vice president; George P. Mallonee, executive secretary; David Porterfield, jr., Arrow Service, president; James R. King, Rex Engraving Co., treasurer; and Edward J. McArdle, McArdle Printing Co., recording secretary. This association was formerly the Graphic Arts Assoc., Washington, D. C.

Michigan Newspaper Orders Goss Offset—The Birmingham (Mich.) *Eccentric*, serving a suburban Detroit area, has ordered a new Goss Suburban two color webfed offset press, consisting of four units of four pages each, with a Goss rotary jaw type folder. Reviewing the purchase agreement are, left to right, George R. Averill, president of the *Eccentric*; Hank V. Henry, Goss Company, and Paul N. Averill, vice president of the *Eccentric*.

Hawaiian Weekly Installs Web Offset—The Hawaiian *Reporter*, Honolulu, whose first edition was published June 4, 1959, has installed a Hantscho single unit web offset perfector press. Unit is equipped with a rewind and a Hantscho automatic collator and folder. Miss Bonnie Archer, of Hawaii, is pictured looking at the first sample edition of the *Reporter*.



Washington Firm Buys Heidelberg—Alexander Printing Co., Everett, Wash., recently installed a 10 in. by 15 in. Original Heidelberg platen press. Pictured, left to right, are Harry Kluge and Bob Alexander, co-owners of the firm.

"THE SAW WITH THE BALL BEARING TABLE"

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What Editor & Publisher says about the new Intertype Monarch

"For an amazing performance exposition visitors had only to join the throngs at the quarter-of-a-million dollar exhibit of the Harris-Intertype Corporation and watch the Monarch do its stuff. As tape raced through the operating unit, brass matrices poured from the transparent magazine into the assembly, making a clinking rhythm like that of a poker player at Las Vegas riffling silver dollars, and quicker than you could say aces back-to-back column-width slugs lined up at the rate of 14 per minute.

"Six years in development and at a cost of something like a million dollars for research and experimentation, the Intertype Monarch has already passed its field tests with flying colors at the *South Bend* (Ind.) *Tribune.*"

The above quotation is from the September 12th issue of Editor and Publisher. Write or phone for information on the new Monarch linecasting machine.

HARRIS INTERTYPE CORPORATION

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